

July 31, 2018

Chairman Ron Shoopman
Arizona Board of Regents
2020 N. Central Avenue, Suite 230
Phoenix, AZ 85004

Dear Regent Shoopman:

Attached are reports on my individual performance incentives for FY18. This year's reports focused heavily on comprehensive program evaluation and review of critical areas of the institution, as well as our connection to K12 and statewide policy priorities. We addressed areas of the university from pipeline programs and partnerships through student recruitment and success all the way to our graduate programs. I am pleased to report that the culmination of several large-scale initiatives begun earlier in my tenure, including centralized service efforts such as marketing, IT services, advising, and our One NAU project, have positioned us for the next steps included in these plans.

Also provided in the attached report is an initial update on my multi-year goals. This is the first year in this cycle and thus the analysis is still early. I am pleased with our institutional progress to date and look forward to updating you on our progress. As our student population continues to increase and NAU maintains its commitment to access and diversity, our greatest challenge most likely relates to meeting the first-year retention goal. While our total number of students retained year-over-year continues to increase, growing the percentage by what amounts to a full percentage point per year has its challenges. Addressing this important goal is certainly at the forefront of our institutional planning and integral to NAU's strategic planning and efforts around student success.

I look forward to a collaborative year ahead working with the Enterprise Executive Committee and ABOR leadership. The potential in Arizona is great and the leadership, faculty, and staff at Northern Arizona University are dedicated to contributing to improving the quality of life and economic prosperity of Arizona residents and the state itself for the future.

Sincerely,



Rita Hartung Cheng
President

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2018-2020 Multiple-Year Incentive Report Update

As an organization, Northern Arizona University continues to be student-centered, focusing on student, faculty, and staff engagement at an individual and personalized level. This is our hallmark and something that both our alumni and our current students note as a key factor in choosing NAU as well as a defining characteristic of their NAU experience. Data we have acquired through a recent survey of NAU alumni we conducted in collaboration with Strada-Gallup support this. As NAU has developed, expanded, and created a more vibrant Flagstaff campus community, developed multiple educational delivery models throughout the state, and built an online enterprise, we continue to reflect on this priority when evaluating our programs and practices and when launching new initiatives that will lead NAU into the future.

While our individual actions can address the needs of one student at a time, it is also necessary to build data reporting and analysis into our culture to better serve our entire student population. This movement toward building processes and systems, as well as collecting and analyzing data, has been a critical component of my initial years at NAU. This effort is aligned with the development of ABOR metrics for the system and each individual university. I appreciate the collaborative nature in which NAU's metrics were developed, and while there are stretch areas for the institution, I believe they are the right targets, not only for NAU, but also for the State of Arizona. I am confident that we can continue to grow our enrollments while maintaining a personal experience for our students, growing our research enterprise, and remaining focused and strategic in our target areas.

These goals do not come without challenges. The freshman retention goal in particular will require NAU to support our student success initiatives at the university-wide level that individuals have verbally committed to. Our immediate years are challenging as we remain committed to the ongoing expansion of our diverse student population to continue to reflect the diversity of Arizona's population and provide access to residents of the state to affordable, high-quality higher education. As outlined in other reports focused on K12 partnerships, Achieve60AZ goals, and Student Success, it is critical to maximize resources from all funding sources and partnerships at all levels to achieve these goals. While we work to maximize resources and partnerships, we must remain vigilant in the efficiency of our delivery and implementation to reach this goal and support increased numbers of students with improved persistence and graduation outcomes.

Below is an update on the status of my multiple year goals for the next three years. As I have said in almost every speech to the NAU campus, the communities we serve, and to the Regents, these numbers guide our decisions and resource allocation and drive us toward our goals. These goals also remind us that NAU is about the students, faculty, staff, alumni, donors and supporters who make up our campus community and the stories behind each of their journeys. I am proud of the progress we continue to make in each area, serving a greater number of diverse students and providing access to Arizona students and families. I continue to look forward to the future.

- **Freshman Retention:**
 - 2017: 75.8%
 - 2018: 74.4% (preliminary data as of 7/16/18; final available in Fall)
 - 2020 Goal: 78.0%
 - 2020 Over-Attainment: 78.5%
- **Research Expenditures:**
 - 2017: \$46.3M
 - 2018: \$52.9M

- 2020 Goal: \$40.8M
- 2020 Over-Attainment: \$42.2M
- **Bachelor's Degrees Awarded:**
 - 2017: 5,901
 - 2018: 5,876 (projected; final available in Fall)
 - 2020 Goal: 6,431
- **Total Students:**
 - 2017: 29,989 (Fall 2016-FY17)
 - 2018: 30,704 (Fall 2017-FY18)
 - 2020 Goal: 32,716 (Fall 2020-FY21)
- **Number of Degrees in High Demand Fields:**
 - 2017: 3,547
 - 2018: 3,751 (projected; final available in Fall)
 - 2020 Goal: 4,146

Progress toward two university initiatives measured over multiple years is provided below. These goals represent NAU's strategic priorities. Progress in these critical areas represents defining decisions for NAU's long-term future. These goals represent the culmination of leadership changes, resource reallocations, and campus culture adjustments. I am confident the progress we have made to date has established a framework to address the challenges ahead. NAU will need to remain nimble to adjust to changing environments and student needs, while continuing to build on its traditions and strengths.

The most important initial measure of an organization is financial viability and solid business practices. It is not just my accounting background that establishes this measure as a top priority, but also the reality of a strong financial and organizational basis on which resources can be allocated and efficiencies achieved. As has been outlined and discussed, after years of state budget reductions amounting to approximately \$60M, NAU was on its way to economic recovery when I was first hired. However, during the first year of my presidency, NAU experienced a \$17M state budget reduction. This change led to a FY16 NAU budget that was not structurally balanced by approximately \$4M, as one-time funds were used to balance the annual budget. FY16 required many difficult decisions and we used that year to develop longer range planning, implement operational efficiencies, and reallocate resources to areas of the organization that could produce additional revenue. We made these adjustments organizationally to minimize the impact on our students. Following on initial years of implementing sound budget practices and efficiency steps, we have begun significant change management efforts in our business practices and I look forward to the continued work by a representative working group and implementation of these initial efforts, which will have long-term positive impacts on the health of NAU.

Initial efforts this past year include implementing a consolidated and streamlined recruitment and admissions process and a centralized advising model employing Civitas throughout Academic Affairs, establishing Salesforce as the university Client Relationship Management (CRM) system, and eliminating other unique CRMs within individual departments. We will continue to evaluate and adapt our student support systems in FY19 with use of data analytics. We have also developed a coordinated framework to review and prioritize business process and system enhancements, and engaged the assistance of Huron Consulting Group to evaluate our administrative service delivery and implemented ProSci Change Management across campus. The campus leadership team will receive Huron's assessment by the start of the fall semester and will utilize this upcoming year to implement changes to more effectively align the delivery of human resources, finance, budget, accounting, and research administration to meet the service responsibilities of these functional areas and increase communication, coordination, and transparency throughout the organization in these areas.

The final area of review is a comprehensive evaluation of NAU's academic organizational structure with a report to the Board describing changes implemented necessary to ensure an appropriate academic structure to address student population growth. As you are well aware, I have taken the first critical step to bring in an interim Provost to work with me on a full assessment of NAU's academic structure while we conduct a national search for a new provost with full campus participation. This allows time for changes to occur prior to the arrival of a new individual who can begin new leadership with an effective organizational structure already in place on arrival. Several student-focused and human capital resource-saving efficiency measures have already been established, including multi-term enrollment for our students, which allows students to plan their courses farther in advance to ensure they can get the classes they need and want and provides the university greater planning tools in hiring quality instructors to schedule needed courses. Through our One NAU initiative, centralized advising services have been organized from a decentralized college-based structure to provide greater student services across all of NAU's campuses and delivery models. This assists in equalizing advisor to student caseloads and provides consistency in training and expectations while still maintaining advising program expertise. There is still much work to be done prior to achieving this goal, but we are well on our way. The establishment in FY18 of both a new Honors College and the new College of Engineering, Informatics, and Applied Sciences (CIAS) were vital organizational efforts aimed at attracting and retaining high achieving students at NAU.

As we move ahead, I am confident in our direction as a university and look forward to updating the board on further progress on our ABOR goals.

2017-18 Student Access and Success: Executive Summary

Northern Arizona University has prioritized student success and access as Goal One in our Strategic Plan. This includes enrollment of diverse students and the retention and graduation of our diverse student body. NAU's commitment to diverse student access to postsecondary education begins in middle school and high school through a series of programs, which highlight a path to academic and financial preparedness for all, not just to NAU. These programs are primarily funded through grants secured through NAU's talent and relationships. Supported programs include GEAR UP, TRIO, and Bridge. These programs work primarily with lower income, often first generation college-bound, middle and high school students and their families. They help explain admission criteria for Arizona's public universities, federal financial aid, and scholarship programs, and serve as a general resource and guide. NAU also supports two College Resource Centers in northern Arizona to provide similar resources. Additionally, consistent with NAU's mission to serve Native Americans, NAU has partnered with several Native American communities to develop a literacy preparation program to help with planning for postsecondary education, as well as self-sufficiency. This material is incorporated into high school curricula.

Specific to NAU's student enrollment planning and commitment to access, an initial evaluation of the current student population and assessment of enrollment metrics was reviewed. In aggregate numbers and by every disaggregated component, staff could report on our current and past enrollment trends. Those numbers had been evaluated by different areas of the university, including undergraduate enrollment and student affairs, what was previously known as extended campuses, international student services, the graduate college, and more. A strategic discussion regarding each area of the university's contribution to student enrollment and the benefits of intentional outreach, recruitment, and marketing was needed and was the first focus of this initiative. An enrollment strategic plan is being refined with a coordinating leadership team and specific metric committees. This effort is assisted by national expert, Tom Williams, whose background as one of higher education's leading authorities on enrollment management, offers more than 20 years in elevating Noel-Levitz to its role as higher education's leading enrollment management consulting firm. He has consulted directly with more than 500 colleges and universities.

Over the last two years, NAU has taken several critical steps to define its access mission broadly. Evidence of success can be measured in part by comparing who applies to NAU and who is admitted to NAU in several distinguishing categories, such as first generation college student, low income student, ethnic diversity, level of academic preparation, and transfer student status. NAU has adopted several strategies to serve each student group with the personal attention and differing engagement programs necessary to ensure their success at NAU. Critical focus areas for this plan include the establishment of the Office of First Generation Student Services to centralize programming and eliminate duplication of efforts, dissolution of University College, elimination of the Freshman Year Initiative (FYI), and elimination of NAU's "Extended Campuses" and replacement of this siloed service model with the One NAU model. Other critical focus areas include the establishment of the Honors College and the development of the Honors Living and Learning Community that will open this Fall, purposeful expansion of graduate programs aligned with areas of research strength, such as astronomy, or workforce needs, such as cybersecurity, and the establishment of the new College of Engineering, Informatics and Applied Sciences (CEIAS) as approved by ABOR in June 2018.

Well known for its personalized student experience, NAU certainly has a collection of programs and initiatives to support student success. Evaluation of these initiatives came from a nationally recognized expert, Teresa Farnum, who has worked with more than 300 campuses to improve student learning,

success, and satisfaction. Her diversified background includes change-management leadership in academic advising, freshman programming, first-year seminar, developmental studies, honors programming, quality customer service, student life, and faculty development related to teaching/learning and its impact on retention. Teresa has helped bring an outside perspective to our organizational structure supporting student success, as has her participation in national partnerships for learning-oriented projects, such as the AASCU Frontier Set, RFY, APLU Transformation Cluster, and iPASS. Results from these evaluations include the use of learning outcomes in academic decision making; evaluation and proposed reorganization of our academic advising structure; additional technological student success tools, such as the academic career Jacks Planner and Civitas; increased faculty and student communication, with options for academic assistance by faculty as well as other student support services; and expedited implementation of single student information platforms that integrate academic and non-academic student information into a single site (through the use of Salesforce).

Educause provided valuable insight into NAU's efforts as we closed out our iPass grant. The NAU team unified efforts through the One NAU initiative, which developed several key centralized structures, including advising, and streamlined processes. The focus on deploying Salesforce technology as a CRM to unify all student success information and efforts will bridge university units and student communications. Educause recognized Civitas as the thoughtful emphasis on managing the student support efforts in a single system that leverages our ability to predict and support student outreach. This third party validation of our efforts provides a good summary of several of the successful efforts on which we have embarked. As with all initiatives, maximizing limited resources was critical and this effort required an analysis of both financial and human resources, as well as a critical review of where technological enhancements could be utilized to improve efficiency.

NAU's efforts related to access will be strategic and aligned with the university-wide Strategic Enrollment Plan. Strategies within this plan include careful analysis of student demographics within Arizona and opportunities outside the state to attract diverse populations, program offerings by campus and delivery mode, and institutional strengths and partnerships. This effort has begun, as outlined above, with the elimination of programs, units, divisions, and silos, as well as the streamlining of processes and reorganization of leadership teams to support the goals. We have received ABOR approval for new program offerings on the Flagstaff Campus and we have modified programs to deliver them in concurrent enrollment models and expanded programs to new locations to reach new student populations.

With regard to student success, NAU had already invested in both Civitas and Salesforce Software, which provides predictive data analytics of student portfolios and ensures student communications across campus is seamless and proactive as well as reactive. Expanding the utilization of these tools for greater intervention, issue resolution, and student outreach was a natural next step. This required additional staff training beyond our enrollment management and student affairs staff and into our academic staff, particularly advising. Next steps in implementing our student success efforts will include additional expansion of the campus staff and faculty utilizing these tools and increased capitalization on the software features.

As you will see in the overall plan, we continue to narrow and refine our strategies. While our efforts are focused on student success and access, our plan requires involvement from all aspects of campus to ensure success. I look forward to making significant progress in the next year to ensure close collaboration between academic affairs and our enrollment management and student affairs staff to ensure our efforts continue to be targeted and successful.

2017-18 Student Access and Success

Northern Arizona University has prioritized student success and access as Goal One in our Strategic Plan. As you will see in this detailed plan, we have made significant progress on the enrollment of diverse students and are reviewing our initiatives that focus on retention and graduation of diverse students.

When I arrived at NAU, I initiated discussions on the need to centralize functions on campus and the need to develop an enrollment strategic plan. We engaged Teresa Farnum, a nationally recognized expert on improving student learning, to aid in facilitating this effort. Teresa's expertise has provided important recommendations, including reorganizing to create a centralized advising model. Tom Williams has also been retained to provide recommendations on our enrollment strategic plan. Tom's expertise will continue to push the campus to refocus their metrics to align with our strategic enrollment goals.

This section will focus on the objectives outlined in our enrollment strategic plan and includes our current strategies, an evaluation of these strategies and planned future strategies necessary to address the outlined challenges in order to be successful in the mission and goals we have outlined.

Objective One: Increase Access to Higher Education

Northern Arizona University has prioritized access efforts first and foremost for Arizona residents. These efforts have included a variety of strategic and interconnected efforts including student outreach, tuition and financial aid strategies, student support services, campus locations and program offerings and delivery modalities. These focused efforts on recruiting and creating pathways to NAU degrees first for diverse Arizonans and are enhanced by efforts around recruitment of diverse populations globally that enrich educational experiences of all NAU students. While NAU has steadily increased enrollment of diverse populations (such as students of color, low income, first generation), we acknowledge the challenges of reaching place-bound students, fully meeting the financial need of students, and scaling college readiness efforts to have meaningful impacts on populations less likely to be prepared for college.

Current access efforts center on recruitment, financial aid strategies, predictable and differentiated pricing strategies, grant and donor-supported programs, college readiness partnerships, online offerings, and partnerships with community colleges.

Recruitment initiatives play a critical role in promoting college access. Many recruitment activities occur off campus in the form of high school visits and college fairs. In the year leading up to the 2017-2018 academic year, admissions staff visited 848 high schools and attended 573 college fairs. A variety of on-campus recruitment events also promote college access. Broad campus visit events such as Discover NAU and NAU Said Yes Days are supplemented by specialty events such as Native American Visit Day, Transfer Visit Days, and Honors Days. On and off campus recruitment initiatives help students navigate the admissions and financial aid process, which can be especially beneficial for our first-generation college students and families. Recruitment initiatives help drive college access throughout the state.

Admissions staff strive to visit every high school in the state of Arizona at least once annually, which helps ensure that the incoming student population resembles the population of the state of Arizona. A diversity recruitment team, including a coordinator for Native American recruitment, helps ensure that recruitment initiatives are reaching all regions. For example, during the year leading up to the 2018-19 academic year, admissions recruitment staff participated in 179 recruitment events within the Yuma area, including several events that included a Spanish language option for prospective students and

families. In tandem with the Spanish language sessions, there has been an overall increase in the outreach within the San Luis area near the Mexico border. Spanish language sessions have also been expanded to events throughout the state. It is critical that we address our work with cultural and language sensitivity to break down barriers if we want to attract new populations of students to our universities.

The university has strategically deployed financial aid strategies to maximize college access and success, such as:

- The newly created and awarded Jack's Transfer Scholarship, a need-based scholarship for transfer students that provides up to \$4,000 per year for two years. The 2NAU partnerships with Arizona community colleges utilize Jack's Path to maximize transfer credits and includes a \$2000 per year scholarship opportunity for two years.
- The Teachers Academy provides a partnership with NAU and statewide community colleges as a constructive solution to the teacher shortage by increasing low-cost pathways for future teachers. Our Grow Your Own partnerships prepare future teachers who are committed to their local communities where the first two years are at the community college and the second two years of the education degree taken at NAU are tuition-free at designated locations.
- A Lumberjack Scholars Award (merit scholarship) for Arizona high school graduates relies solely on high school grades in core academic coursework to reward consistent strong academic performance over an entire high school career rather than performance on a one-time test. The value of the scholarship covers 100% of Arizona resident tuition for four years at NAU.
- Arizona resident and non-resident merit scholarship eligibility requirements include moderate test score minimums to mitigate test score differences observed for underrepresented groups.
- Western Undergraduate Exchange (WUE) program offers 1.5 times in-state tuition to residents of all 16 WUE-member states/U.S. territories.

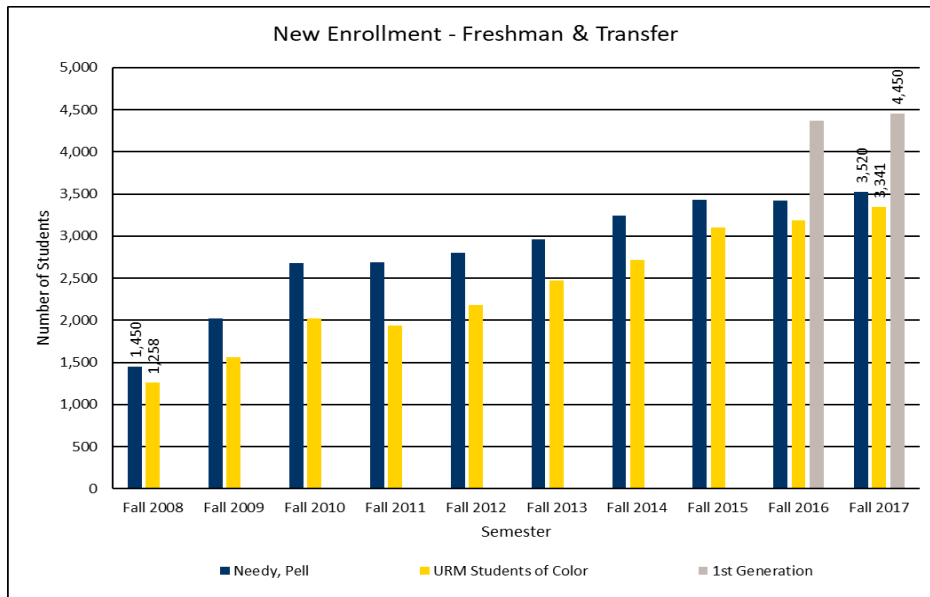
Differentiated pricing for online, statewide community campus and Flagstaff students provides options for students throughout the Arizona and beyond to access NAU programs at a price and delivery modality that works for them. One example is the Pledge tuition rate. Our Pledge Program is a promise that guarantees students attending the Flagstaff campus pay a fixed tuition rate for up to four years. Another example is our low tuition rates for students who choose to attend on one of our statewide community campus sites. We have several programs benefiting students attending the Yuma campus, such as the WUE program and The Good Neighbor Tuition Agreement. The Good Neighbor Tuition Agreement is available to part-time students living in California within 75 miles of the Arizona border and attending NAU Yuma. Yuma students eligible for this rate may receive the in-state tuition rate while enrolled up to six credit hours. Finally, ABOR policy provides that any individual who is an enrolled member of an Indian tribe recognized by the United States Department of Interior whose reservation land lies wholly or partially in Arizona and extends into another state and is a resident of the reservation shall be eligible for resident tuition, thus benefitting a number of our Native American students from other states.

Grant and donor-funded opportunities also contribute to student access. We could provide an exhaustive list of the many programs which make up the collaborative approach to student success at NAU, but what is important to identify is a sample of programs to demonstrate the types of components necessary to serve students less familiar with a university environment, and the financial, academic and social expectations. This is evident in the successful initiatives at NAU. Program review data will then be provided to demonstrate the evidence-based evaluation occurring in order to efficiently address the needs of these students and promote their progression to successful graduation and career. Examples which will be referenced later in the report include:

- Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) a grant program which provides support to an entire class of students beginning in grade seven and follows the cohort through the first year of college. Serving 4,000 students in 30 rural schools in 6 AZ counties in-school partnerships replicate successful strategies with sustainable outcomes in multiple and diverse communities: <https://nau.edu/coe/gear-up/>. Important contributions have included College Resource Center development and the College and Career Planning Guide in partnership with Expect More Arizona.
- TRIO is a set of federally-funded college opportunity programs that motivate and support students from disadvantaged backgrounds in their pursuit of a college degree (Council for Opportunity in Education, 2018); NAU has received TRIO grants from the U.S. Department of Education for over 30 years, serving more than 2,600 low-income, first-generation students and students with disabilities — from sixth grade through college graduation — through Upward Bound (UB); Upward Bound Math and Science (UBMS); and Talent Search. Services reach students from the following high schools in northern Arizona and across the Navajo Nation: Winslow HS, Williams HS, Coconino HS, Flagstaff HS, Hopi HS, Holbrook HS, Many Farms HS, Monument Valley HS, and Tuba City HS.
- Summer bridge programs assist high school students from disadvantaged backgrounds make a smoother transition into college. NAU hosts three exemplar bridge programs for first-generation and low-income students (Successful Transition and Academic Readiness - STAR), Native American students (NASS Bridge), and students whose math placement is lower than the expected starting point for their intended degree (Peak Performance). Each bridge program is structured to meet the unique needs of its target population: STAR offers a five-week academic and residential cohort experience, NASS Bridge provides a one-week experience before the start of fall term, and Peak Performance includes online modalities and peer coaching. A primary focus of the Math bridge program is to set students up for timely degree progress.

Other grant programs are targeted at specific disciplines such as healthcare or STEM and align with NAU's efforts to attract a diverse population of students into under-represented career fields and to serve communities of need.

Evaluation of these programs enables us to identify successes and challenges. Evidence of our success around access includes three primary measures: our enrollment of diverse students, college-going rates of program participants, and programmatic outcomes orientated toward measuring college readiness. Our enrollment of diverse populations is one way to monitor access to NAU. As illustrated in the chart below, over the past several years, enrollment growth of first-generation, low-income, and ethnically diverse students demonstrates increased access for historically underrepresented groups in higher education.



Notes: URM Students of Color include American Indian/Alaska Native, Black/African American, Hispanic/Latino, Native Hawaiian/Oth Pac Island and Two or More Races; 1st Generation data was first collected on Fall 2013 FLGMT applications and Fall 2016 CCO applications. On the Flagstaff Campus, new enrollment for 1st Generation students has increased from 2,330 in Fall 2013 to 3,091 for Fall 2017.

Enrollment of Native American students has increased by 9.7% since 2013, growing to 1,584 students in Fall 2017. Our undergraduate Native American enrollment places us at 14th in the country in IPEDS most recent comparisons of four-year public institutions. In 2017, *Diverse Issues in Higher Education* ranked NAU 8th in their Top 100 Producers of Bachelor’s degrees awarded to Native American students and ranked NAU 2nd in awarding Hospitality Administration/Management Bachelor’s degrees to Native American students.

Hispanic student enrollment is also increasing, and the university is progressing toward being eligible for the Hispanic-Serving Institutions designation per the Higher Education Act. Our Yuma campus has already been designated a Hispanic-Serving Institution, and with more than 22% of our student population statewide being Hispanic or Latino, NAU as a whole is well on its way to meeting the criterion (i.e., full time equivalent undergraduate student enrollment of at least 25% Hispanic). A key strategic goal is to pursue the Hispanic-Serving Institution designation as soon as NAU’s Hispanic student enrollment reaches the required threshold (i.e., 25%). The designation will provide the institution the opportunity to pursue federal funding to implement best practices for serving Latino and other underrepresented students. These federal monies fund community outreach and access, academic support, faculty engagement and professional development, and improved academic pathways – particularly for transfer students - to increase persistence, progression, and degree attainment.

Program outcome data demonstrate our success in expanding the college pipeline and reaching diverse groups of students with college readiness programs, both pre-college and concurrent with their college years. Programs measure learning (i.e., college readiness skills and perspectives) and college-going rates and related outcomes. Strong performance across programs has been observed, including the following sample highlights:

- 100% of participants agreed that STAR summer bridge helped them feel confident about attending NAU for college; 100% agreed STAR helped them become familiar with resources to succeed at NAU;

98% agreed STAR helped them identify time-management techniques and other skills to succeed academically.

- 80% of NASS Bridge participants surveyed built confidence in their academic abilities; 100% understood what it takes to be a successful college student; 91% reported the program very much (70%) or somewhat (21%) prepared them for NAU coursework.
- 150 of 155 (97%) of high school seniors in the Talent Search program completed the FAFSA; 118 (76%) enrolled in postsecondary education.
- 17 of 18 (94%) of Upward Bound Math and Science participants and 14 of 22 (64%) of Upward Bound participants who graduated high school during the school year were enrolled in a postsecondary institution the following fall.
- 100% of graduating high school seniors in Nizhoni Academy – our program serving Native American high school students -- are enrolled at universities this fall, including NAU, Stanford, UCLA, and Fort Lewis College.
- GEAR UP high school graduation and college-going rates exceed the state average (83% vs. 73% and 72% vs. 51% respectively, 2012).

Future efforts aim to bolster access for diverse populations by focusing on affordability, transparent pathways, and enhanced college readiness support. This includes the implementation of transfer need-based scholarships, enhanced degree pathway tools, and the expansion of college resource centers, educational partnerships, and grant-funded opportunities. Both increasing the depth of our efforts and their geographic breadth are key moving forward. Additionally, being selected to participate in the American Public and Land-grant Universities (APLU) Transformation Cluster Initiative offers an important opportunity for NAU to critically examine our approach to access, share our successful strategies, and learn from other institutions that face similar access challenges. Importantly, NAU's APLU Cluster participation will give us further opportunities to advance our work related to student access, retention, and degree completion, expand our efforts to address the achievement gap and provide us with support from existing HSIs. NAU's status as an emerging HSI will benefit from these structured experiences and relationships with other universities.

Our newly implemented need-based transfer scholarship is an example of how we are leveraging financial aid to support access across all modalities and campuses. The need-based award is new for fall 2018 and has already been awarded to 993 new transfer students.

NAU hosts the Northern Arizona College Resource Center (NACRC), which provides information, technical assistance, and advice related to navigating pre-college testing, applying to college, and securing financial assistance to attend. The NACRC, established with Arizona GEAR UP grant funds, as well as a Helios Education Foundation grant, supports students at 19 high schools in Yavapai, Coconino, and Maricopa counties, with additional support in Navajo, Apache, and Mohave counties. In addition, partnerships have been cultivated with LAUNCH Flagstaff and Yavapai County Education Service Agency to enhance exposure in the northern Arizona region. Recently, the NARC has partnered with the Yavapai County Education Service Agency to expand college access services in Yavapai County with an additional site. Applying for college, FAFSA, and ACT/ SAT prep camps are now being offered. A newly remodeled Center, housed near our NAU Yavapai campus provides space and resources to meet one-on-one with area students.

This summer, Peak Performance on the NAU Flagstaff Campus focused on expanding services to 800 students. More peer coaches have been hired to accommodate this growth, and we will continue to target larger populations of students. One group that we will work to target is out-of-state students who do not typically complete four years of high school math and often attend orientation after the

normal Peak enrollment ends. We have also collaborated with Native American Student Services to focus on encouraging more Native American students to participate.

Enhanced partnerships with community colleges are being pursued. Based on feedback received from our community college and industry partners, we have successfully created three new 90/30 programs that will be launching this fall: Applied Human Behavior, Industrial Leadership, and Strategic Leadership. These programs add to NAU's eleven other programs that accept more than the standard 64 units of coursework from partner institutions. These student-focused transfer friendly programs provide Arizona residents some of the most affordable paths to a bachelor's degree. Additionally, plans for this academic year include expanding the 2NAU program to out of state community colleges, beginning with the California community colleges where we have the largest transfer numbers.

Reaching students in every geographic region of the state, statewide community campus programs reflect our commitment to access. Every NAU program offered on a statewide community campus now has a predictable rotation of classes that are scheduled with consistent dates and times. Each required upper division course is offered in a hybrid format that provides valuable face to face interaction with faculty and classmates, along with the flexibility of having online content. Marketing and resources have all been enhanced, such as new co-branded brochures for each statewide community-campus programs detailing specific class sequences and course descriptions and revised webpages for each campus have been launched. Furthermore, collaboration with the International Offices at both Maricopa Community Colleges and Pima Community Colleges are moving us toward certifying existing NAU employees as officials needed to grant admission to international students into our community campus programs. Regular meetings between NAU and the Native American Offices at Maricopa Community Colleges have also been established to support Native American transfer student success.

The Jack's Path Tool continues to be a cutting-edge technology that assists students and advisors in determining a student's best transfer plan to NAU. This tool clearly shows students how each class taken (or planned) transfers and how it will be accounted for in an NAU program. For each NAU undergraduate major, students can see which courses they can take at their community college that apply directly to that major along with the NAU upper division courses they need to take to complete the degree. Furthermore, the tool allows the student to create a semester plan of courses to create a schedule to graduation.

NAU Online provides in-demand degree and certificate programs to working adults. With multiple start dates, adult students can begin a program outside of the traditional academic year, take classes that are flexible to fit into their busy schedule, and pursue pathways to new skills development, career progression, or personal enrichment. NAU offers several transfer options for adults who may have paused their academic career to give their attention to other of life's priorities and are now re-engaging to complete a degree. NAU Online programs are affordable, with competitive per credit hour pricing. NAU Online also offers a competency-based program, where students pay one flat rate for six months of access to their program of study, allowing flexibility and acceleration in time to degree.

We recognize that it is important for future planning that we look critically at the data to know areas of NAU which are in need of attention and our statewide community campuses are highest among that list. Access at these sites as well as online education will be critical points for the future while we continue to address student success through the many initiatives on the Flagstaff Campus that have been outlined. Engagement in our transfer programs is evident in the success of our new and redefined tools. Since the Jack's Path tool was launched last year, over 10,000 unique accounts have been created. Furthermore, over 11,720 students have participated in 2NAU programs. To date, 2,951 unique students have enrolled

in our competency-based, Personalized Learning, education programs where we have only begun our outreach efforts. All are intentionally designed to open the door of higher education to students for whom traditional pathways are not feasible.

Objective Two: Enhance Student Learning through High Quality, Student-Focused Educational Experiences

Student learning is at the center of our work at NAU. While many factors enhance student success, student learning is an essential ingredient and must occur for students to succeed in attaining a degree. Deeply engaging students in learning requires intentional monitoring of student academic performance, faculty and staff training, analysis to identify learning and academic performance hurdles, and the use of these findings to improve future efforts. Our current efforts to promote and enhance student learning and academic success include faculty training on developing effective teaching practices, course redesign, and co-curricular opportunities that complement academic goals. Over the past two years, coordinating student learning with in and out of the classroom experiences has had a powerful effect on student success.

NAU was selected to participate in three prestigious national partnerships. These have offered the opportunity to not only learn from other institutions but also to share our successful strategies with peers.

- Educause's Integrated Planning for Advising and Student Success (IPASS) project focused on the unification of student information streams into a single platform (Salesforce CRM), development of an improved "early alert" faculty to student communication system, and supported the adoption of predictive tools for student support units.
- NAU was selected to participate in the Frontier Set, a diverse group of 31 colleges, universities, and higher education systems identified by the Bill & Melinda Gates Foundation and intermediary partners such as American Association of State Colleges and Universities (AASCU) as being leaders in continuous improvement for student success. Each institution established and is implementing a campus plan focused around three areas: Redesigned Advising, Digital Learning, and Developmental Education. NAU's participation in Frontier Set incorporates projects such as the installation of adaptive learning courseware in liberal studies and gateway courses, revision of lower-level mathematics courses such as MAT 100 and MAT 108, and revision of English's co-requisite course placement guidelines to ensure that supplemental writing support is provided to the students who most need it.
- Re-Imagine the First Year of College (RFY) efforts focused on developing an enduring culture of student success through comprehensive faculty professional development programming. With great teaching, students succeed.

Given that faculty members are critical to the success of students, we are developing comprehensive faculty professional development programming. For example, forty faculty have earned the Certificate in Effective College Instruction by participating in the American College and University Educators' (ACUE) Online *Course in Effective Teaching Practices*. A second cohort is planned for FY19. The integration of adaptive courseware aims to provide efficient, effective, and customized learning paths to engage each student, thus increasing the likelihood of course completion and enhanced learning. The goals of this American Public and Land-grant Universities (APLU) adaptive learning grant include incorporating adaptive courseware in general education courses such that at least 20% of all student enrollments in general education courses are impacted by adaptive courseware. In 2017-2018, adaptive courseware was implemented in six courses: BIO 181, BIO 182, CHM 151, PSY 101, ISM 120, and PSY 240.

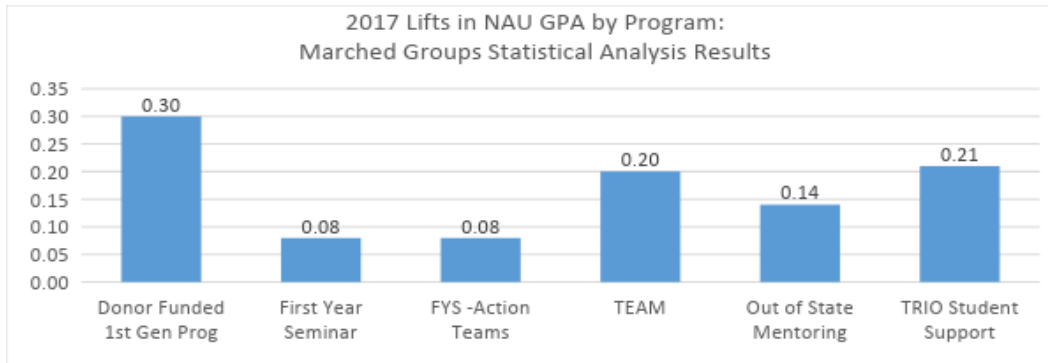
Course redesign, adaptive courseware implementations, new support courses, and student utilization of

enhanced academic support and mentoring programs yielded improvements in DFW rates, rates of good academic standing, and course grades. We are making steady progress in improving successful course completion rates (i.e., reduction of DFWs earned) in high enrollment courses (100+ students enrolled for all class sections in fall and spring semesters). In AY 11-12, 25.1% of high enrollment courses had > 20% DFW compared to 18.8% in AY 17-18. More specifically, the integration of adaptive courseware is geared toward improved academic performance. Most of the courses with full implementation show increased student success, for example, the ABC rates was 4-5% higher in fall 2017 than fall 2016 for ISM 120, PSY 101, and PSY 240. With additional support for faculty, we expect similar improvements in BIO 181, BIO 182, CHM 151, and CHM 152.

The impact of academic support, such as tutoring and supplemental instruction on GPA and retention have been studied using regression analysis. Statistically controlling for other experiences and characteristics, the past five years of analyses demonstrate that participation in these resources positively contributes to both retention and GPA. Additional studies have identified the level of engagement required by students for an impact to be realized. That is, students participating in the Math Achievement Program (MAP) (e.g., math tutoring tailored to specific courses) are not likely to see a measurable benefit if they engage with MAP resources only once. Thus, recent efforts in collaboration with instructors have focused on encouraging students to engage early and on sustaining their engagement.

The Academic Success Centers (ASC) provide targeted support for large enrollment, high DFW courses through tutoring, supplemental instruction (SI), and academic mentoring. Over 100 courses are supported through one-on-one tutoring, 35 courses/130 sections are supported through SI, and annually the ASCs serve more than 8,000 students through 80,000 visits. The Academic Mentoring Program was created in FY17 as a way to connect struggling students to ASC resources early in the semester. The program utilizes peer mentors to connect with freshmen and sophomores who receive concerning Faculty to Student Early Alert (F2S) messages. During phone conversations, students are encouraged to meet one-on-one with the mentors to develop customized success plans that address F2S concerns. Students are highly encouraged to meet with a peer mentor three or more times during which they assess and improve study strategies and connect to tutoring and SI appointments. During FY18 the Academic Peer Mentoring program significantly increased its outreach by staffing more mentors and adding sophomores as a target population. As a result of this expansion, the program made 68% more F2S outreach calls in FY18 (6,042) as compared to FY17 (3,605). Visits to the program increased by 65% (613), and unique students served increased by 65% (375).

Several mentoring programs and courses designed to help students overcome academic hurdles that prevent persistence are evaluated annually for their impacts on participants' retention rates and GPAs. The table below displays statistically significant lifts in GPA attributed to program participation, identified through a statistical rigorous technique that controls for the difference in participants and non-participants and allows for the calculation of increases (or "lifts") in outcomes such as GPA and retention.



While programs such as the donor-funded First Scholars Program for first-generation students and First Year Seminar courses consistently yield gains in GPA, the analysis also helps to identify programs where benefits were not realized. A good example of a program that was eliminated after changes to the program failed to yield consistently positive results is the Native American Student Services - First Year Seminar Course collaboration. In addition to small to no effects on students' academic performance or retention, the program served very few students. With the elimination of that effort, resources were allocated to the NASS Bridge and mentoring programs which are showing promise, serving more students, and were expanded in Summer 2018.

Courses focusing on the academic support are designed for students who have not been successful and complement other proactive and preventative initiatives. First-year and transfer students on academic probation are required by university policy to enroll in NAU130: Back on Track, which is designed to reduce behavioral and scholastic roadblocks by supporting them in successfully identifying and developing personal and academic management strategies that promote academic progress and individual development. Specifically, for transfer students in NAU 130, over 60% improved their academic standing (good standing or continued probation) and thereby remained eligible to return to the university.

Related to the First-Year Academic Advising Learning Outcomes, results illustrated that students who identified a purpose for their education with an academic plan ended their first year with 0.27 higher GPA on average than their matched counterparts. NAU has adopted policies in this area included at the end of this report.

Academic degree progress is an important success metric that goes beyond measuring credit accumulation. This measure indicates how much of a student's major and minor coursework has been completed. Our institutional tool for interactive degree planning (i.e., Jacks Planner) supports student academic progress. Jacks Planner provides students with interactive maps through their degree completion by automatically generating a recommended, multi-semester course sequence through to graduation. The technology considers a student's current transcript, including completed and currently enrolled coursework which results in an up-to-date planning tool. Utilization of the tool increases with each freshman class. In Fall 2017, over 12,368 students logged into the tool for a total of 63,481 log-ins. Student behavior suggests the tool adds value by increasing course selection, rearranging schedules and exploring what a change of major would mean to their projected end date.

NAU's recent initiative to implement multi-term enrollment (MTE) allows continuing NAU students to enroll in the Summer, Fall, and Spring terms at the same time. This development complements the planning functionality of Jacks Planner by permitting students to enroll for courses for an entire academic year. Tools that facilitate long-term planning and enrollment make the path to completion

transparent and reinforce messages of progression. As of June 2018, over 11,000 students have enrolled in the spring 2019 term.

Key future learning and academic performance initiatives focus on faculty professional development, adaptive courseware implementation, course redesign, and course support. These efforts bring forth opportunities for faculty to improve the in-class experience and to structure learning that supports not only content acquisition, but also the development of academic behaviors that will aid students throughout their undergraduate career. Ongoing faculty professional development efforts are in place to ensure faculty is prepared to teach today's students and that courses are designed to actively engage students in deep learning. As previously mentioned, through the *ACUE Online Course in Effective Teaching Practices*, approximately 40 faculty will learn how to implement all of the essential practices shown to improve student outcomes.

While we have made tremendous strides in the assessment of student learning within degree programs and Liberal Studies, we need to improve our institutional use and integration of assessment results and concentrate on improving course completion rates in specific courses. To address these challenges, we plan to implement the following:

- Based on the Effective Writing assessment findings report, we've charged the new Director of Interdisciplinary Writing to facilitate the integration of scaffolded writing within degree programs.
- To ensure that degree programs are attuned to the success of our graduates, we have expanded the academic program review process to include the collection of feedback from stakeholders—particularly alumni and employers.
- Through the APLU adaptive learning grant, at least 20% of all student enrollments in general education courses will be impacted by adaptive courseware. We will continue to work with the faculty who are teaching with the adaptive courseware as it often takes some time to get used to a new style of teaching.
- To improve course completion rates, in conjunction with academic deans and faculty, we will deploy additional course redesign efforts in high enrollment courses with high DFW rates.

Additionally, course redesigns are planned for BIO 181, MAT 108, and MAT 100. Co-requisite courses are being examined to determine appropriate placement and impact. In FY19, the Lumberjack Mathematics Center will pilot co-requisite support for MAT 108: Algebra for Pre-Calculus. A cohort of 200 students who placed into MAT 100 will instead be placed directly into MAT 108 and co-enrolled in MAT 199, a complimentary support course. The outcomes will be analyzed to determine if the co-requisite model improves outcomes and therefore warrants changes to placement policy. Full-time faculty have been deployed to teach several sections of MAT108, which will facilitate additional analysis.

Finally, the inclusion of transfer students in the probation course was piloted, and the curriculum was refined to meet the unique needs of these students. For the Fall 2016 transfer cohort, the first-time probation rate was 17%. In particular, lower division transfer students went on probation at rates more than twice their upper-division counterparts. This probation rate is similar to the first-time, full-time freshman probation rate which ranges from 15-17%. The data supported the idea that transfer students on academic probation could use additional support. Because the course was already developed and offered to freshmen on probation, a pilot for transfers on probation was implemented in Spring 2018. The course curriculum was modified to address the different experiences of transfer students, and Transfer and Commuter Connections provided each student a peer mentor. The course will continue to be offered each semester with students being automatically enrolled in sections exclusively for transfers. Fall retention rates are forthcoming, with available data indicating that 60% of transfer students enrolled in NAU130 are eligible to remain at the university.

All of these efforts are geared toward improving foundational knowledge acquisition that leads to improved academic success. Responding to studies of employers and civic leaders' needs (Hart Research Associates, AAC&U, 2014), we will continue to develop strong curricula and educational practices that will better prepare today's students for success as workers and citizens in the 21st century, including the newly designed Innovative Thinking and Problem-Solving certificate. This undergraduate certificate engages students from across disciplines to synthesize and apply innovative thinking skill sets and the design process to a diverse range of disciplinary, inter-disciplinary, and multi-disciplinary issues and problems.

Objectives Three and Four: Increase the Number of Students Who are Retained and Graduate

Overall, retention and graduation rates have been increasing steadily for several years, but achievement gaps persist. With increasing populations of students who tend to retain and graduate at lower rates, continued increases will be challenging. Thus, NAU is investing in a nimble, multi-pronged approach that leverages national partnerships, relies on assessment and rigorous analysis to identify and scale proven practices, and values continuous improvement and innovation. Our current retention, persistence, and graduation efforts include comprehensive strategies that leverage the Client Relationship Management system (Salesforce), predictive analytics (Civitas), our one-stop center; course-based and faculty and advisor training efforts; and co-curricular initiatives. Because retention is a primary step to progression and graduation, much attention has been paid to ensuring first-year freshman and new transfer students persist to their second year at NAU. In recent years, broader support for the persistence of all academic levels of students has been a focus.

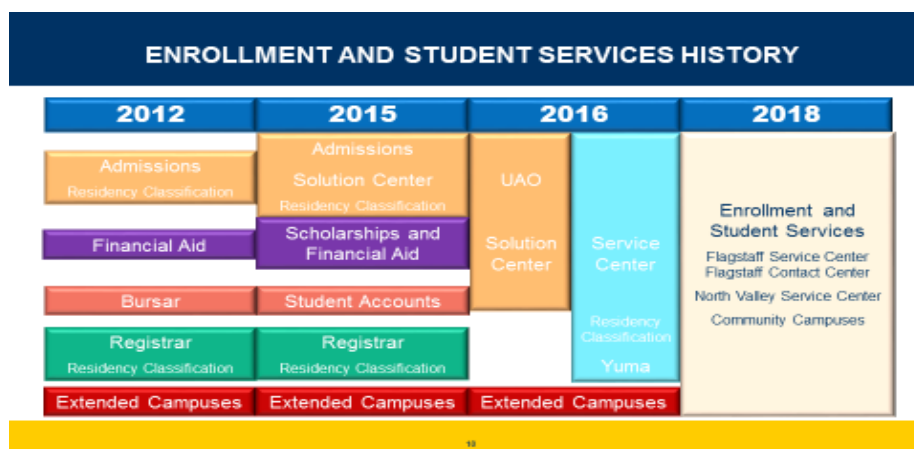
Comprehensive retention efforts for all students leverage the integration of technology. Our new Salesforce CRM provides a single point of real-time information about each student's journey through the University. The integration of disparate information into the CRM (e.g., grades, advising notes, engagement, success indicators/predictions, account balances, knowledge bases on FAQs, etc.) enables staff to quickly locate all the needed information to answer student questions, document concerns to share with other key offices, and provide efficient, informed support. Further, the CRM functionality triggers cases based on any number of criteria (e.g., poor mid-term grades or missing application items) to the appropriate staff/office for systematic follow-up or intervention. For example, staff utilize cases to systematically respond to F2S alerts, poor midterm grades, and lack of enrollment for future terms.

Civitas Learning provides predictive analytics tools, which not only provide dynamic predictions about student persistence but also identify courses that pose particular challenges and roadblocks to student success. The predictive course data is used to redesign courses that are impeding progress, and the individual student prediction data, for students of all academic levels, alerts advisors and other staff to populations of students in need of additional support and guides outreach efforts. Proactive communications to students through email nudge campaigns include encouraging engagement with resources, social activities, employment and career development opportunities, and more. Program use of Civitas scores focus on refining mentoring conversations to address intervention factors or affirm student strengths and success behaviors.

Ensuring students have access to current technology is not only important for academic success, its essential to future success in the workplace. To that end, we have raised classroom technology standards by modernizing instructional technology that increases engagement; improved environments that create opportunities for small-group learning; upgraded computer labs; and deployed software with collaborative capabilities that integrate students' learning experiences. Additionally, we are deploying Modo Labs Smart Phone App to reach students where they are (i.e., on their phones) and

MyNAU portal to a highly personalized environment with improved access to online services, resources, events information, and critical messaging/notifications.

The creation of one-stop centers (i.e., Student Service Center) centralized and cross-trained Admissions, Registrar, and Financial Aid staff to more efficiently provide service to students. The physical location of these functions in one office not only eliminated the need for students to traverse campus or call multiple offices to access services, but it also prompted better coordination among offices. The Student Service Center has locations on the Flagstaff and Yuma campuses, has an online office, and has Student Service Coordinators at 18 sites throughout the state. For example, the Yuma Service Center provides transfer guidance to Arizona Western College students through the 2NAU program, which includes program enrollment, advising, and transition to NAU. Today the Student Service Center serves an average of 1,766 cases per day, via multiple modalities (in-person walk-in, email, mail), handling tier one student processes and managing ongoing cases through the Salesforce CRM.



Faculty training initiatives that intentionally focus on improving retention underscore our belief that faculty members are critical to the success of students. In line with that belief, we are developing an enduring culture of student success through comprehensive faculty professional development programming. A locally-developed 8-10 week blended course, Persistence Scholars Program, engages faculty in the scholarship of academic persistence, addressing myths and misconceptions about persistence, and expanding their understanding of what it is like to be a first-year student at our university. Thirty-two faculty completed in FY18, with two additional cohorts planned for FY19. Assessments of this program focused on participant ratings of target competencies (e.g., the ability to identify and dispel myths about why students persist), perception of the usefulness of different specific assignments and materials, and suggestions for how the program can be refined for future cohorts. While it is too early to assess the direct impact of this program on student learning, we are encouraged by participant comments and ratings indicating that the program built important conceptual knowledge about academic persistence and that they felt more empathetic about or better understood the challenges faced by contemporary students.

NAU’s recent centralization of advising units brought deliberate attention to the structure, experience, and processes associated with academic advising. To respond to increases in and diversification of enrollment, academic advising was restructured to intentionally meet student demand for services and provide individualized retention support complementing the work of our faculty. Among the practices that centralization allows are uniform customer service standards, consistent utilization of predictive analytics and self-service appointment scheduling tool, and predictable processes across academic

disciplines and levels. Investments in new advisor onboarding and regular training contribute to the retention plan by investing in qualified and well-trained professionals serving students. Advisors are positioned to guide and support students as they progress through their academic careers. Advisors assist with academic plan and sub-plan selection, course selection and sequencing, resource and tool referral, enrollment, policy interpretation, and coaching students through their academic requirements and challenges.

Course-based retention efforts span a range of departments and approaches. For the least academically prepared students, enrollment in the College Success Program is required. It serves students who have an incoming HS core GPA of ≤ 2.75 (for the fall 2018 cohort, students with a HS core GPA ≤ 2.85 will be included in the program). Students are automatically enrolled in NAU120A or BIO181A, which provide a small class environment, structured faculty interactions, peer mentoring, and a foundational academic experience focusing on the skills that lead to academic success. Based on assessment findings, the program model for Fall 2018 has been redesigned to address the higher need in the realm of mental health and financial need and the inclusion criteria has been expanded.

Given that NAU students who have declared a major by the end of their second semester are retained at approximately 11% higher rates than students who have not declared a major, students are automatically enrolled in USC150: Making Major Decisions if they are Exploratory, Pre-Major Track, or indicate low academic preparedness for the Nursing degree. USC150: Making Major Decisions is intended to teach skills in making big decisions in general, and decisions about their major in particular. By identifying strengths and interests, setting goals, clarifying values, and reflecting on the decision-making process, students develop a framework for making academic, career, and life decisions. USC150 has a substantial impact on the major declaration, with all 2016-17 participants having a much higher rate of declaring or changing majors by the second semester than matched non-participants (40.7% vs. 24.6%), and participants of color having an even higher rate than matched non-participants (46.5% v 22.9%).

Focused attention on key majors with lower than average retention has begun in earnest. For example, the department of Criminology and Criminal Justice (CCJ), led by the Chair of the department, was eager to be involved in the university's retention planning efforts. The demographics of CCJ students indicate that they are overrepresented in all areas associated with increased risk (underrepresented minorities, first generation and Pell eligible). This is an important aspect to consider when determining improvements in and out of the classroom to support student learning and development. However, other challenges caused issues for the department as well. CCJ250: Criminology had a high DFW rate and was a Liberal Studies designated course. This designation was removed and beginning in Fall 2018 will only be available to CCJ majors. Other strategies included targeted tutoring by course. Action plans were required of any student repeating a course for the second time. This process required individualized conversations with the Chair that led to resource referrals and most of all accountability for the student. These departmental tactics to support student success will be measured in Fall 2018 as retention metrics become available.

Co-curricular retention initiatives are housed in Student Affairs and include proactive support for groups with historically lower retention; peer and staff mentoring; research, leadership, and career opportunities; and a suite of programs for diverse populations. The Freshman Outreach Program (FOP) is a cross-departmental initiative that targets a group of incoming freshmen who have historically retained to their second year at NAU at lower than average rates. Student Affairs staff connect with targeted students to build awareness of the campus resources, while reinforcing each student's strengths associated with persistence and good academic performance.

Populations observed to retain at lower than average rates are supported by several offices and programs.

Student Affairs Mentoring was the first non-residential effort to utilize a large number of student peers to scale retention efforts. More than 1,000 freshmen participate in peer mentoring, social activities, and local field trips as a means to create a sense of belonging away from home. Student Affairs Mentoring targets out-of-state students. The Office of First-Generation Programs (FGP) was established in 2014 after several new programs and services were implemented in conjunction with the longstanding Student Support Services program. FGP now serves over 1,000 students through high-touch mentoring programs and emergency services including the Textbook Loan program and Louie's Cupboard food pantry. Mentoring programs include Student Support Services, First Scholars, STAR Summer Bridge, and Blavin Scholars. The Office of Inclusion (IMQ) provides direct support and mentoring to students of color and LGBTQIA students, as well as programmatic activities that create a sense of belonging for underrepresented students navigating a majority culture. In 2017-18, IMQ served 389 first-year students through mentoring and outreach efforts, and major event attendance where attendance was counted was 573, and approximately 350 students are in IMQ supported student organizations.

Co-curricular retention efforts also include those programs that deeply engage students who are typically not the lowest retaining group but might be expected to retain higher than they do. For example, high achieving students may fall into this category. For these students, undergraduate research, leadership programs, the Honors College, and career development activities are important retention efforts. The office of Undergraduate Research and Scholarship offer freshmen through seniors the opportunity to participate in undergraduate research in a variety of disciplines. Two of the larger programs, Interns 2 Scholars and the Hooper Undergraduate Research Awards program, offer students the opportunity to work closely with faculty mentors throughout the year. Interns 2 Scholars experienced a great deal of growth this year with an increase in research internships from 14 in FY17 to 42 in FY19. The diversity of students participating in these opportunities is changing as well, with an increase in Latino/Hispanic students from 5% in FY17 to 23% in FY18 and first-generation students from 20% in FY17 to 37.5% in FY18.

The Student Engagement Record is an unofficial, self-reported record of students' experiences and accomplishments while attending NAU. This record reflects activities both in and out of the classroom while communicating them in the language of transferable skills that are relevant to employers. Activities include achievements, employment, campus involvement, leadership, certificates/training/conferences, experiential learning, and community service.

Career Development and Student Employment offer self-paced online modules that cover over 30 different career-related topics, including 21st Century Workplace, Professional Skills, Developing Application Materials, Networking and Relationship Building, Internships, Job Search Strategies, Interview Skills, The Hiring Process, Thriving in the Workplace, and more. Student employment, internships and other professional development opportunities provide real work experiences to students at all academic levels.

NAU's Honors College provides a wealth of opportunities for high achieving students who often have many college options. The new curriculum includes an eight credit hour Pathway, individually tailored for each student, that culminates in a unique Honors Capstone pursued with a selected faculty mentor. Starting in Fall 2018, Honors students will have the opportunity to live in a 205,000 ft² state-of-the-art living-learning community. This new construction includes dorm rooms as well as classrooms, an advising center, and collaborative space. Honors students bond with each other and faculty at the start

of each fall semester during the annual Honors overnight retreat held in the Centennial Forest. Small classes and events throughout the year reinforce close relationships. NAU's Honors enrollment has tripled over the past decade and topped 1,400 students in 2017-18.

Evidence of retention, persistence, and graduation includes the increasing retention and graduation rates of freshmen and transfers. Additionally, statistical analyses also demonstrate the effectiveness of programs and course-based efforts on student persistence.

Over the past five years, incremental increases in freshman and transfer retention rates have been observed. Similarly, 6-year graduation rates for both students who began as freshman and transfer students are on an upward trend. Early information on Fall 2018 indicates that our number of students retained will continue to climb, but our rates of retention are showing strains, which is concerning. All programs are currently under re-review as well as the new efforts beginning this fall.

| ONE-YEAR RETENTION RATES | | | | | |
|-----------------------------------|-------|-----------|-----------------------------|-------|-----------|
| First-Time Full-Time Freshmen | | | New Full-Time Transfers | | |
| All First-Time Full-Time Freshmen | | | All New Full-Time Transfers | | |
| Cohort | HC | 1 Yr Rate | Cohort | HC | 1 Yr Rate |
| Fall 2012 | 4,086 | 71.8% | Fall 2012 | 1,711 | 73.2% |
| Fall 2013 | 4,339 | 73.6% | Fall 2013 | 1,731 | 78.1% |
| Fall 2014 | 4,380 | 74.4% | Fall 2014 | 1,843 | 72.9% |
| Fall 2015 | 4,661 | 75.5% | Fall 2015 | 1,992 | 73.1% |
| Fall 2016 | 5,007 | 75.8% | Fall 2016 | 1,816 | 74.8% |
| Fall 2017 | 5,260 | | Fall 2017 | 1,750 | |

| GRADUATION RATES | | | | | | | | | |
|-----------------------------------|-------|-------|-------|-------|-----------------------------|-------|-------|-------|-------|
| First-Time Full-Time Freshmen | | | | | New Full-Time Transfers | | | | |
| All First-Time Full-Time Freshmen | | | | | All New Full-Time Transfers | | | | |
| Cohort | HC | 4YR | 5YR | 6YR | Cohort | HC | 4YR | 5YR | 6YR |
| Fall 2008 | 3,246 | 33.2% | 48.1% | 51.6% | Fall 2008 | 1,327 | 63.7% | 67.1% | 69.0% |
| Fall 2009 | 3,377 | 33.2% | 48.0% | 52.0% | Fall 2009 | 1,460 | 65.1% | 68.2% | 69.5% |
| Fall 2010 | 3,739 | 36.3% | 50.4% | 53.3% | Fall 2010 | 1,764 | 62.9% | 66.6% | 68.0% |
| Fall 2011 | 3,194 | 40.3% | 52.7% | 55.3% | Fall 2011 | 1,781 | 66.0% | 69.3% | 70.4% |
| Fall 2012 | 4,086 | 37.2% | 49.4% | | Fall 2012 | 1,711 | 64.6% | 68.0% | |
| Fall 2013 | 4,339 | 41.1% | | | Fall 2013 | 1,731 | 68.7% | | |

One-year retention rates for full-time Hispanic/Latino freshmen have also steadily increased over the past five years. The Fall 2016 cohort was retained at a rate of 73.2%, the highest on record, but still 2.6% below the rate for all NAU full-time freshmen who also began in Fall 2016.

| One-Year Retention Rates | | | | | |
|--------------------------|------------------------------------|-------|-------|------------------------|-------|
| Cohort | Full-time Hispanic/Latino Freshmen | | | All Full-time Freshmen | |
| | HC | | 1YR | HC | 1YR |
| Fall 2012 | | 844 | 66.4% | 4,086 | 71.8% |
| Fall 2013 | | 916 | 71.2% | 4,338 | 73.6% |
| Fall 2014 | | 995 | 72.0% | 4,380 | 74.4% |
| Fall 2015 | | 1,096 | 72.4% | 4,661 | 75.5% |
| Fall 2016 | | 1,199 | 73.2% | 5,007 | 75.8% |

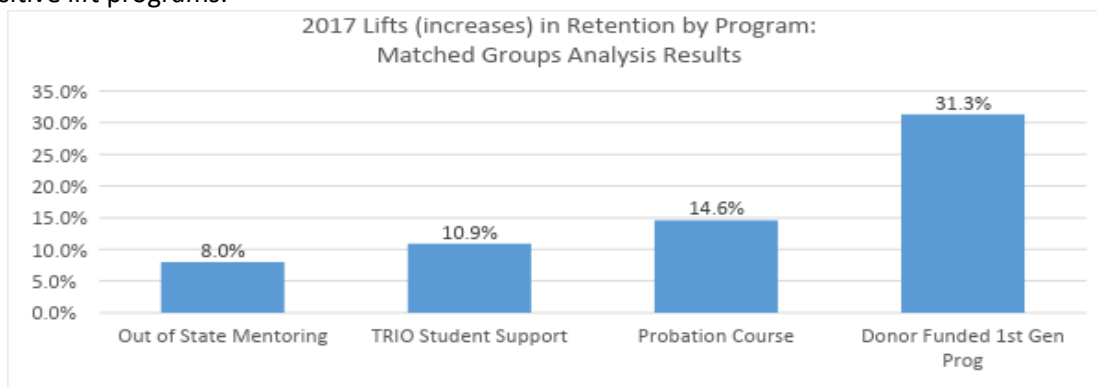
Factors that Predict Retention and Guide Our Efforts

Understanding the role of different factors in retention is essential to developing experiences that mitigate challenges students face and provide support that promotes persistence. The statistical analysis offers insight into factors that are positively and negatively contributing to retention.

Regression analyses conducted over many years identifies prior academic performance as the most powerful predictor of retention. Since NAU does not intend on restricting access we use other consistent predictors of retention including three positive predictors (i.e., living on campus, attempted credits, use of supplemental instruction/tutoring) and one negative predictor (i.e., first-generation student status) to inform our work. Additional analyses have also identified low income and membership in a historically underrepresented ethnic group as negatively correlated with retention. Beyond academic performance, the next most important/largest factor in several years of retention studies is unmet financial need. Across four years of analysis of the ten most consistent predictors of retention, students' unmet financial need is consistently the largest negative predictor of retention. In an additional analysis, the results of the First Year Success Inventory (FYSI) demonstrate that psychosocial characteristics also predict retention. Specifically campus involvement and commitment to earning a degree positively predict first-time freshman retention to the second year. Closely related to campus involvement, a student's sense of belonging has also been observed to be related to retention. Considering these predictors of retention, the Freshman Outreach Program (FOP) aligns these student characteristics with support programs. As noted, the primary purpose of FOP is to proactively reach a targeted group of incoming freshmen and connect them with campus resources and support staff. Staff offer early intervention to target students who are at a greater than average risk of not retaining, and through a particular order to group students, FOP avoids duplicating outreach and support to a student who falls into more than one group.

High Impact Programs: Expand

Across five years of retention studies, several programs stand out as providing statistically significant lifts in retention. Programs with no effect have either been eliminated or redesigned unless they showed a positive effect on GPA that in turn positively affected retention. Programs showing consistent positive results (such as those in the table below) have been expanded or are currently slated to be scaled to serve more students. These programs are analyzed each year to ensure that we are aligning efforts with student need. The following table summarizes findings by program for several years of analysis. Peer Jacks (out of state student mentoring), TRIO Student Support Services, NAU 130: Back on Track (probation course), and First Scholars (donor-funded first generation program) in recent years stand out as positive lift programs.



Individual results like the following are available for each program. NAU 130 results are provided as an example. Participants in NAU130: Back on Track (i.e., probation course) had a retention rate to second year 24.8% higher than matched non-participants (39.6% vs. 14.8%). With 675 participants, this equates to 167 students retained who otherwise would not have without NAU130. NAU130 had a positive and statistically significant impact on underrepresented students.

| Impact of NAU130 on Retention to Second Year Fall 2015 and Fall 2016 Cohorts | | | | | | |
|---|-------------|-------------------------|------------|------------|-------------------|---------------------|
| | Participant | Matched Non-Participant | Difference | Odds Ratio | # Students Served | # Students Retained |
| Fall 2015 | 40.9% | 18.0% | +22.9% | 3.14 | 564 | 129 |
| Fall 2016* | 39.6% | 14.8% | +24.8% | 3.78 | 675 | 167 |

Low Impact Efforts: Eliminated or Replaced

Results from analysis of both co-curricular and course-based initiatives have led us to eliminate less effective efforts. For example, Academic Transition Programs investigated the course-based peer-coaching model associated with the program through a Scholarship of Teaching and Learning (SoTL) exploratory study over the last three semesters. The peer coaching program employed 50-60 peer coaches each academic year, yet the impacts of the program were unknown. The study's results did not support the continuance of the current model. As a result, the peer model was redeveloped, which led to a reduction in workforce. The program reallocated those funds and a new program was developed to support students who demonstrate a higher level of risk. In another example, in three years of analysis, the NASS/FYS initiative was found in every year to not affect participants' GPA or retention and was eliminated.

An excellent example of a program we eliminated and are modifying to meet a larger number of students in a more meaningful way is residential learning communities (RLC). Modeled on national best practices, our RLCs brought together freshman students by major or interest area in the Freshman Connections residence halls. The RLC program existed for over 20 years and saw substantial growth, from five to 36 communities. Scaling the RLCs beyond 800-900 was not feasible, however, and more recent statistical analysis supported grouping students by college rather than major to help all first-year residents build academic affiliations. This new model, Residential Colleges, is being implemented in Fall 2018.

In another example, while Student Success Coaching was observed to have a positive effect on participants' GPAs, it did not contribute to a positive lift in student retention. Further, the population served was not at risk of poor academic performance or attrition but instead was a high performing group for which other initiatives were already in place (e.g., the Honors program, clubs, and organizations, and leadership opportunities). As a result, the program was eliminated, and resources were reallocated to the Academic Success Centers to develop an academic mentoring program to serve higher-risk students who need assistance with academic skills and support.

In Spring 2018, a First-Generation Student Action Team was added to the University Retention Plan to develop initial strategies to reduce the retention gap between first- and continuing-generation students. The team is comprised of faculty and staff, representing a strong Academic and Student Affairs partnership. The strategies created by this team focus on establishing a first-generation student community, increasing resource awareness and usage, providing engagement opportunities, and expanding existing faculty/staff training, which is closely aligned with the Educational Advisory Board (EAB) tactics to support first-generation students through collaborative campus-wide strategies.

NAU's long-standing commitment to student access and success is the foundation for the University's approach to providing educational opportunities to residents of the State. Building on this foundation, we continue to deliver high-quality programs which are evaluated and assessed to the highest standards. This assessment guides our future efforts, and we continue to refine and develop new efforts. The higher education environment changes rapidly, and we must respond just as swiftly in our approaches and innovations in our teaching and methods of providing support to our students. These

new opportunities allow us to continue to build on our successes and expand our opportunities:

- Bolster access for diverse populations by focusing on affordability, transparent degree pathways, and enhanced college readiness support.
- A continued, fundamental focus on deeply engaging students in learning and their academic success through refined and new faculty professional development, adaptive courseware implementation, course redesign, course support and student development opportunities.
- Connecting the curricular to the co-curricular in truly meaningful ways, to encourage students to apply knowledge learned in the classroom to real-world experiences and challenges.
- Closing the achievement gaps through comprehensive persistence, progress, and graduation efforts that leverage technology, scale proven initiatives, and employ new, creative approaches to educating students in an ever-changing student demographics environment, reduced state support, increased competition, and rapidly evolving technologies.

Future retention, persistence, and graduation efforts include leveraging technology, scaling successful efforts, and redesigning how courses engage students in learning. Additionally, our participation in the APLU Transformation Cluster and Frontier Set offers a unique opportunity to learn and apply best practices from other institutions serving similar populations. As noted previously, NAU was recently invited to participate in the APLU Transformation Cluster Initiative, which will give us further opportunities to advance our work related to student access, retention, and degree completion, expand our efforts to address the achievement gap/equity gap and provide us with support from existing Hispanic-Serving Institutions. NAU is in its second year of the Frontier Set which will continue to provide institutional and national networks of student success as a priority.

Ensuring student success and access is our top priority, our first goal in the NAU Strategic Plan. Regardless of how a student chooses to learn – online, at one of our statewide community campuses, or in Flagstaff, we are committed to ensuring they have the resources needed to attain their educational goal. This plan outlines the efforts underway and describes the evaluation of programs and initiatives and the redeployment of resources to successful efforts and elimination of those not demonstrating results. Also described are the challenges and opportunities ahead to meet the ABOR 2025 metrics and the needs of the State of Arizona in providing access to postsecondary education to a broader population and a successful path to degree attainment. Student success and access are core values at NAU and embody our historic strength as a student-centered university. We look forward to the work of meeting the ABOR goals relating to student success and access and to updating the board on our progress in this important area.

Overview of Success, Challenges, and Opportunities

| Successes | Challenges | Opportunities |
|---|--|---|
| <ul style="list-style-type: none"> ● Diversity of the student body ● Learning outcomes achievement ● Increased overall course completion rates ● Support program participants' lift in retention ● Development of pathway tools for transfers ● Increases in retention and graduation rates | <ul style="list-style-type: none"> ● Maintaining increases in freshman and transfer retention ● Transfer enrollment ● Scaling programs for growing student body ● Meeting the needs of a changing student body ● Course completion rates in specific introductory courses ● Addressing achievement gaps for historically underrepresented students | <ul style="list-style-type: none"> ● Implementing Residential Colleges ● Participating in the APLU Transformation Cluster ● Maximizing adaptive courseware ● Leveraging predictive analytics and Salesforce CRM ● Coordinating and bolstering faculty involvement in student persistence |

2017-18 Education and K12 Programs: Executive Summary

Northern Arizona University's history as a Teacher's College provides deep roots into K12 education in Arizona. Combined with our commitment to statewide community campuses where teacher preparation programs have been delivered for decades, NAU's relationship with teachers, school leaders, and non-profit education policy leaders is strong throughout the state. This report offered an opportunity to evaluate the history of NAU's College of Education and its programs, enrollment trends, budget, and policies. Additionally, evaluating external partnerships and outreach programs that position NAU to meet the needs of the state, the ABOR 2025 metrics, and the Achieve60AZ goals provided a key opportunity for reflection. This reflection extended into our student recruitment efforts, overall access and student success initiatives, and commitment to the Regents and State of Arizona to serve a critical role in providing Arizona residents pathways to postsecondary attainment and professional success, as well as helping meet workforce demands and supporting the 21st century economy of our state.

In order to achieve NAU's mission of access and student success, the ABOR 2025 metrics, and the Achieve60AZ goals for the State of Arizona, a much broader population of Arizonans must pursue postsecondary education. This goal is critically important, both for improving individuals' lives and for the success of our state. The attached report, as well as the report on student success initiatives, outlines the many ways in which we are working to accomplish this goal. One federal grant funded program administered by NAU, Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP), has demonstrated the impact of collaborative work between a university and middle and high school students. The numbers bear out the impact of GEAR UP, with high school graduation and college-going rates for participants exceeding the state average (83% vs. 73% and 72% vs. 51%, respectively, 2012). I believe we have the tools, and we know what works. What is necessary is to have a broad enough leadership team to stretch to every school and every classroom in Arizona to implement these efforts, and to have the support of policymakers to stick with programs that have proven results and invest in replicating those efforts in other communities. We have to hold individuals accountable to a set of metrics and leaders for investing in those metrics. Achieve60AZ has high level goals and I recommend that they follow other nonprofit education organizations, including Expect More Arizona, and use the Progress Meter to measure success toward achieving these goals.

NAU's commitment to access to postsecondary education is critical to assisting in Arizona's advancement toward reaching the Achieve60AZ goals, which include having 60% of the population hold some form of postsecondary credential by 2030. This is no small effort, with only 32% currently reaching this milestone and the pipeline challenges discussed by the Board on numerous occasions. Despite the challenges, I am proud of the advances NAU has reported annually to continue to increase both our annual enrollment and the ethnic diversity of our student body. Today, almost 37% of NAU students are ethnically diverse, representing Native American tribes from across the United States as well as a variety of Hispanic, African American, and Asian-Pacific Islander cultures. Critical to representing Arizona's population, NAU Yuma is currently a designated Hispanic Serving Institution (HSI) and our total NAU student population is 22% Hispanic or Latino, moving us close to HSI status as a whole in the near future. These efforts are important if we expect to shift the demographics of postsecondary educational attainment in our state.

Recruiting and retaining teachers and school leaders in Arizona is a broad goal to assist the K12 pipeline and reach the Achieve60AZ goals. About one third of Arizona teachers currently teaching in the state who were educated at an Arizona public university are NAU alumni. Given that NAU's total enrollment has grown significantly in the last decade, this long-standing commitment to the Arizona K12 teaching workforce is an important part of our legacy and our future mission. One analysis for this report

included an evaluation of our College of Education's budget that demonstrates consistent commitment to the historical area of importance of teacher preparation within the university, even as the College of Education has experienced significant declines in student enrollment. Resources have not been reduced to the College, but rather have been reallocated internally in the past few years to try to reach a broader group of students statewide and to modify coursework to offer online degree delivery options. Through the Teachers Academy model we have again returned to connecting small numbers of students via technology to one faculty member in order to educate students throughout the state. This is having an impact in areas such as the White Mountains and in Pinal County where we are seeing our enrollments grow in our partnership with Northland Pioneer College and Central Arizona College for the first time in several years. NAU now reaches more than twice as many students through online education programs as opposed to ten years ago, offering more options and more customization to meet student and workforce needs. In partnership with several districts throughout Arizona, we have added programs for individuals who already have a bachelor's degree to become certified teachers by enrolling in one of our three master's degree programs that lead to a full teaching certificate through the Teacher Intern Preparation Program (TIPP).

It is not enough to provide initial teacher preparation education and expect that we will retain a highly qualified teaching workforce in our state. Retaining teachers and ensuring K12 students receive a high quality education that can lead to postsecondary success in our public universities requires a broader investment in teacher education. Providing continuing professional development and opportunities for additional graduate degree attainment for our K12 educators is an active contribution of NAU. Graduate education programs are available through our Flagstaff campus, statewide community campuses, and online delivery options, and we also offer high quality non-degree professional development through a variety of centers and initiatives. The Arizona K12 Center was established as a gubernatorial initiative under Governor Jane Hull recognizing NAU's excellence in preparing teachers. This Center has expanded the initial investment through grants and nationally recognized publications such as the Professional Learning Plan for teachers and the Professional Learning Plan Toolkit. The Center helps teachers prepare for National Board Certification and supports a mentor teacher program in Arizona that helps beginning teachers develop classroom skills that lead to increased retention and improved student achievement. NAU has several partnerships based on our relationships with individual school districts and communities. One key highlight is the Diné Institute, which utilizes the Yale National Initiative model to pair NAU faculty with K12 Navajo Nation educators. The educators participate in collaborative seminars with content-specific professional development provided by NAU faculty in areas of need that are designed to be culturally responsive and aligned to state standards. Established in 2003, our nationally recognized Center for Science Teaching and Learning (CSTL) provides support for our secondary education programs in science and math and offers professional development support for practicing K12 teachers.

Our College of Education's outreach efforts are demonstrated in the ABOR metrics' public service amounts, contributing significantly to the FY17 reported total of \$32,567,608. The College of Education received \$9,845,298 in funding to provide public services that benefit the overall student outreach and teacher support efforts discussed in this report, which are critical to supporting the ABOR metrics and Achieve60AZ goals.

2017-18 Education and K12 Programs

As a member of the State Board of Education, representing the position of university president, for the last two and a half years, I have been immersed in Arizona K12 policy. While often challenging, this has provided an opportunity to meet with K12 and interested business and non-profit constituencies from across the state to discuss issues of importance around the topic of education broadly and K12 education specifically. I have learned that Arizona is especially open to pilot programs and alternative options to try to meet the needs of the diverse population of students throughout the state. Arizona is committed to academic standards and a transparent accountability system for parents to make informed choices. The path to those goals has been helpful to participate in as it has provided a unique perspective into both the policies and politics related to K12 education in Arizona. It is incumbent upon us as institutions of higher education in Arizona that prepare many of the teachers who will enter our state's classrooms that we work to help them meet the overall goals of the state, both through knowledge of state academic standards and awareness of how to meet the individual needs of students by assessing data and knowing how to adapt teaching styles to enhance student success. This continuum of support, professional development, and directed and targeted lifelong learning is something that is critical in all professional careers. As I have travelled the state and met with teachers, administrators, my own faculty, and attended professional development events, this seems an appropriate time to highlight important factors that must be in place for Arizona's K12 system to be successful in retaining teachers and advancing individual student success.

Before highlighting a specific budget related to education programs, it is important to note that there are numerous university-wide initiatives which affect the Achieve60AZ Goals and ABOR Metrics. One key component of the NAU financial model is allocation of new tuition revenue to support increasing numbers of students while maintaining—and continuing to enhance—the student experience at NAU. This is key to student success and our many student success initiatives are described in detail in a subsequent report. This investment is detailed in each budget I have submitted for the Board to approve (see Attachment 1 for most recent FY19 use of incremental funds to support 2025 goals presented at June 2018 ABOR meeting).

The university has a responsibility to educate communities on the need for an educated workforce and to inform individuals about opportunities to pursue higher education in a manner that is affordable and accessible. This effort is critical to advancing the goal of increasing the number of adults with some form of postsecondary education credential. The fact that two-thirds of all jobs will require some type of post-secondary education by 2020 is a call-to-action for Arizona. Arizona currently falls below the national average for the number of residents holding a bachelor's degree or higher, with only 32% of adults meeting this goal. The national average is 36%. The ABOR metrics are consistent with the Achieve60AZ goals as we work toward increasing the number of students who attend college and receive undergraduate and advanced degrees in our state. This effort begins with the Achieve60AZ goal of improving the K12 pipeline and continues through what I would reorder in their goals to increasing access, aligning programs with workforce needs, and completing credentials. Arizona is at a point where the business, non-profit, and education outcome goals are generally aligned. The strategies and alignment of resources to achieve those goals, however, are not yet consistently outlined. For this reason we must primarily seek outside resources to address pipeline program and outreach priorities through grants and philanthropic gifts.

With outreach to K12 from the university primarily self-funded, if those grants or philanthropic dollars do not continue, the staff support cannot continue. Given the current funding model where 70% of the university educational budget is tuition revenue, it is not appropriate to utilize these resources to build a

pipeline of students through outreach activities that are not also supported by the state, federal grants, or philanthropic gifts. Outreach efforts and pipeline programs have become a particular area of focus for NAU's work in the advancement area. NAU has begun the silent phase of its next comprehensive campaign and invested in additional staff to support these efforts. Beneficiaries of these investments are evident in the development of private gifts from organizations such as the Kellogg Foundation and Salt River Project (SRP) as described below.

Outreach to K12 must be modified and tailored to meet the growing and changing needs of individual communities, and we must continue to scale up in order for Arizona to meet the Achieve60AZ attainment goals and for the state universities to collectively advance the ABOR 2025 metrics. In addition to educating qualified K12 teachers, NAU provides critical outreach programs, primarily funded through competitive federal grants that require matching dollars and significant partnerships, including GEAR UP and TRIO Programs. NAU has already reached out and secured the Governor's support to be the statewide applicant for the next round of GEAR UP competitive grants, which have been critical to a number of organizations in Arizona, including providing \$345,000 annually to Expect More Arizona to support their efforts since 2012 and contributing \$50,000 to the Governor's initiative to expand AP testing in Arizona in 2017-2018. Federal grant cycles are nonetheless uncertain and competitive, and matching requirements are frequently difficult to meet. As we continue to identify risks to meeting the ABOR metrics, it is important to recognize that building excellent programs with proven results using unpredictable funding sources will prevent us from advancing our goals. These dollars not only help the universities build capacity, they also assist the state in building capacity by advancing teams such as Expect More Arizona and supporting statewide initiatives.

Exposure to a university campus and the opportunities that postsecondary education offer can be life-changing for young people who have never imagined going to college. If Arizona is to achieve an increased population with postsecondary education, we must support our first generation college bound families in their journey. NAU offers summer bridge programs that assist high school students from disadvantaged backgrounds make a smoother transition into college. These exemplar programs for first-generation and low-income students provide a residential campus experience with peer coaching and targeted academic programming structured to meet the needs of this critically important population.

Evidence of success in NAU's outreach efforts can be seen in the diversity of our incoming freshman classes over the last decade. NAU's entering class in 2017 consisted of 47% first generation college students. Since 2013, enrollment of Native American students has increased by 9.7%. NAU's undergraduate Native American enrollment is 14th in the country in IPEDS's most recent comparison of four-year public institutions. In 2017, Diverse Issues in Higher Education ranked NAU 8th in their Top 100 Producers of Bachelor's degrees awarded to Native American students. Arizona's Latino and Hispanic population is significant and NAU has made great strides to increase the college-going rate with more than 22% of our student population now identifying as Latino or Hispanic. Our NAU Yuma campus is a Hispanic Serving Institution (HSI) and we are well on our way to achieving the HSI designation on the Flagstaff campus as soon as we reach the required threshold of 25% Hispanic student population. These achievements demonstrate the impact of large-scale outreach efforts, as well as targeted partnerships.

Smaller, community-driven, mission-focused grants are equally important to our K12 outreach and efforts specific to the progress of Achieve60AZ, particularly with diverse populations of students. One example is a recent grant from SRP to support NAU's Tribal Environmental Education Outreach Program (TEEOP). This program is administered by the Institute for Tribal Environmental Professionals (ITEP).

The TEEOP staff has provided environmental education and outreach in tribal schools and communities for over 20 years, serving more than 50,000 Native American students and teachers nationwide in an effort to improve environmental science literacy among Native American students and heighten interest in environmental careers. Increasing exposure to quality science education and connecting classroom experience with career opportunities is critical to increasing the pipeline of individuals entering these fields. TEEOP is followed up by other programs at NAU that help introduce Native American students to STEM fields and support their pursuit of STEM degrees.

Another example is NAU's recent grant from the Kellogg Foundation supporting early childhood education teacher preparation in partnership with the Navajo Nation and Zuni Tribe. Culturally grounded education helps students recognize themselves in the curricula and invest in the learning process. This program strengthens the early childhood education communities in the Navajo Nation and Zuni Tribe by emphasizing culturally relevant pedagogical practices. Beginning with early childhood learning, this initiative is part of an overall effort to close the achievement gap for Native American students.

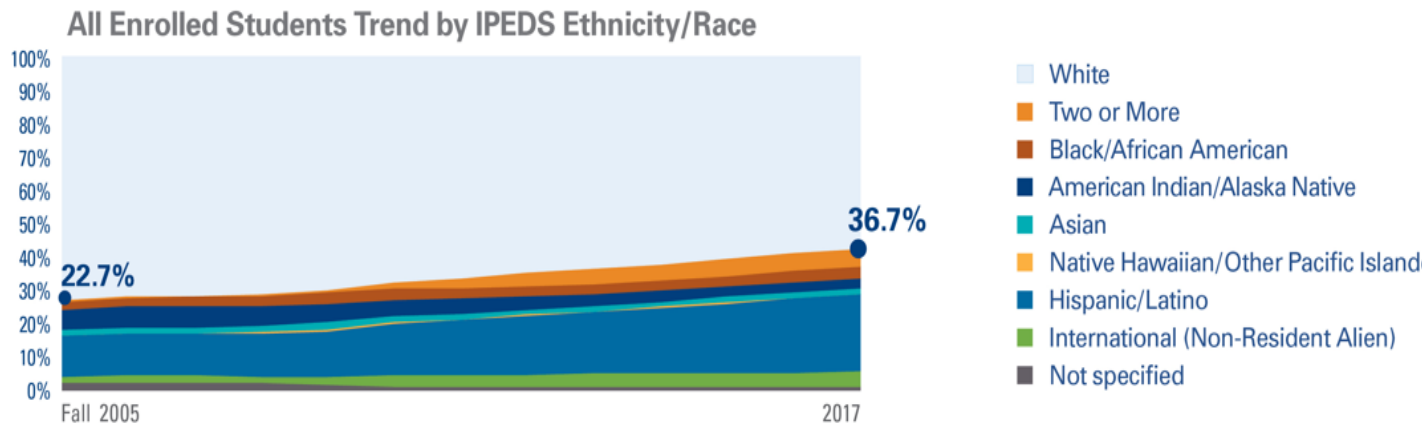
It is the culmination of these efforts that will make a difference. I would not recommend scaling back or eliminating any outreach programs at this time. In fact, I strongly recommend we continue and expand on the efforts NAU has already undertaken to better coordinate outreach efforts, efficiently administer the grant process, collaborate in order to serve the broadest audience possible, and avoid duplicative efforts. We have integrated our University Advancement priorities into the university strategic plan to ensure department and college priorities are considered in the context of overall university priorities. This is most successful regarding major gifts and under continued refinement related to all prospect management. It is challenging to coordinate an institutional focus across all units that results in coordination of resources and program implementation at both the unit and institutional levels. We have made great strides in this effort through the university strategic plan and the development of collaborative teams. In addition, we have centralized business practices which would otherwise result in duplicative efforts and organizational and budgetary inefficiencies. My team participates in numerous statewide boards working to make strides in taking this collaboration to subsequent stages, including the statewide level. I believe our ABOR communication efforts will enhance this effort at the system level.

NAU's financial model has reallocated significant funding to increase outreach services to more diverse communities as part of our overall recruitment efforts. These strategies are aligned with the overall college-going goals of the state, as well as ABOR retention and graduation goals for the university. I can assure you that no component is taken in isolation. The establishment of a strategic enrollment plan with unique committees focused on recruiting, price positioning, marketing, retention, and academic programming demonstrate the holistic, university-wide approach we are taking.

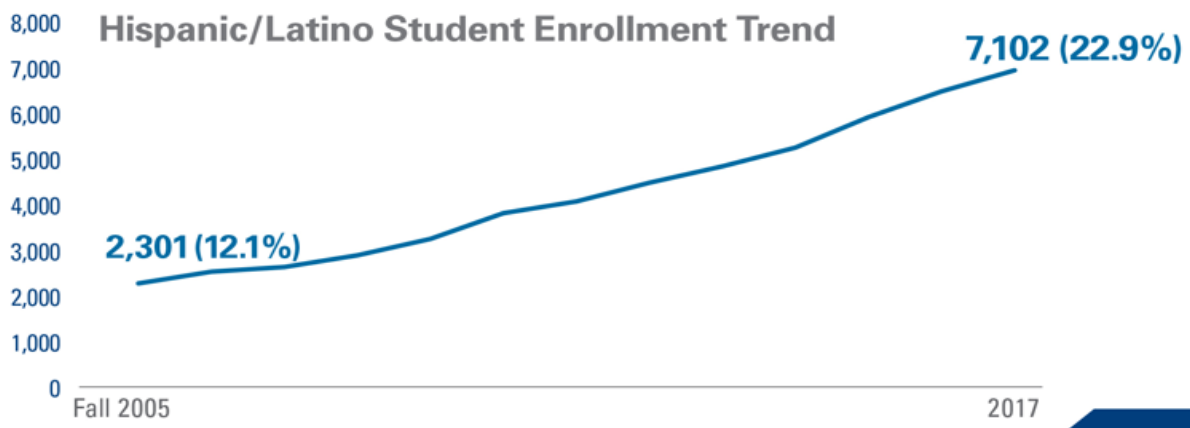
The expansion of our effective outreach programs and increased communication to broader audiences is critical to achieving the state and ABOR goals. NAU's use of technology has been fundamental to this effort, increasing access to smaller cohorts of students through efficient use of faculty resources. Development of academic and career planning tools have been essential and the transformation of these tools into digital documents has been a critical step to reaching broader audiences and engaging the younger generation.

Our Lumberjacks increasingly reflect the diversity that makes Arizona such a special place and our commitment to providing access to a college degree has helped make that possible. Almost 37% of our student body is ethnically diverse. Our students represent 128 Native American tribes and a variety of

Hispanic, African-American, and Asian-Pacific Islander cultures.



As referenced above, more than 22% of our students are Hispanic or Latino. As previously noted, our Yuma campus has been designated a HSI, with our entire university moving toward that designation in the near future.



Our international student population includes more than 1,300 students from 82 countries. While we celebrate diversity, statistics alone are not the driving force behind our efforts. Diversity is the outcome – and the benefit – of our focus on better access to an education for all. Access and student support are critical to the Achieve60AZ initiative and meeting the ABOR 2025 metrics.

Budget reallocation and prioritization has been a central theme of my administration and the College of Education’s programs were an early area of focus and review. Below is the College of Education budget for the last four years. Analysis of the state portion of the budget demonstrates a relatively stable investment of state resources. This is largely consistent with the state investment in the university overall during this time. This is not, however, reflective of a budgeting model where equal resources are applied to each student based on enrollment. The College of Education budget reflects a strategic investment area where the university continues to subsidize the cost of education in order to keep tuition low, particularly given the number of statewide community campus education programs delivered. This is a strategic, deliberate, and community-responsive decision that reflects NAU’s mission, the quality of our education programs, the need for additional high quality teachers in Arizona, and the wages of graduates. Despite overall enrollment declines, which are just beginning to turn around after a decade of decline, NAU has invested local resources specifically targeted at student

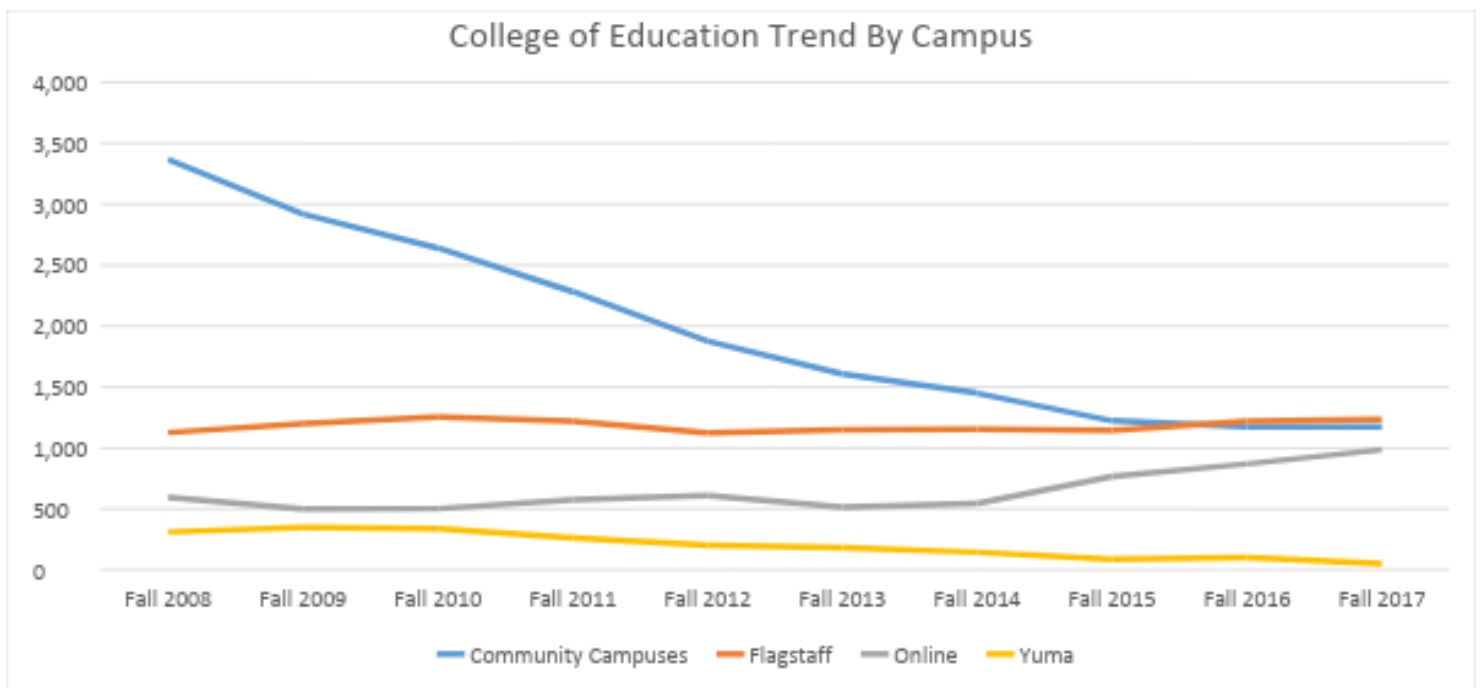
outreach and recruitment to education programs for the last three years, now further enhanced with the NAU Teachers' Academy Initiative.

College of Education Budget Trend

| | FY15 | FY16 | FY17 | FY18 (YTD) |
|----------------------------|--------------|--------------|--------------|--------------|
| State | \$14,465,560 | \$14,082,532 | \$13,954,412 | \$13,738,058 |
| Local Fund Balance Forward | \$1,101,325 | \$1,916,247 | \$2,548,337 | \$2,585,194 |
| Local Fund Revenue (Fees) | \$1,236,822 | *\$3,182,389 | \$3,237,616 | \$3,344,332 |
| Total | \$16,803,707 | \$19,181,168 | \$19,740,365 | \$19,667,584 |

*FY16 revenue increase of approximately \$2M represents moving the Education Technology Consortium (ETC) from the Vice President of Research to the College of Education. The ETC is a cooperative between NAU and school districts across the state providing customer support and training for technology resources.

As is the case with all colleges of education across the United States, NAU has experienced a decline in enrollments in education majors over the decade.



*Total enrolled, undergraduate and graduate.

The decline in the number of students graduating is much more pronounced at the graduate level than the undergraduate level. The result is that the number of new teachers produced for the workforce has only slightly declined, but those staying in the workforce or continuing their advanced degrees has

declined greatly. Many of the reasons are beyond the control of any individual institution of higher education, but we can certainly contribute to the solution. Education is an area of excellence for NAU and we must continue to be a highly sought after program by students and employers. To do so, we must ensure that we are well connected to the communities we serve. In our review, we found several areas for improvement along with several bright spots that have opportunities to scale to meet the needs of larger populations. One of our outreach steps has included engaging a third party provider to assist in student recruitment and enrollment management for the College of Education given the significant decline in enrollments. This contract is based on a revenue share model and has had positive enrollment impacts since employed in FY16.

NAU has numerous education programs designed to meet the needs of individuals at different points in their journey to becoming teachers. Teacher education and preparation has a considerable impact on reducing teacher attrition, and we hope to prepare individuals to make teaching a career. As of May 2018, there were 91,146 certified teachers in the State of Arizona, of whom 51,495 report they are currently teaching. Arizona's public university enterprise has provided almost half of those certified teachers with bachelor's degrees from our institutions (43,237 certified and 25,812 currently teaching in Arizona). NAU educated approximately one-third of all certified teachers in Arizona as well as those actively teaching, educating 12,485 and 7,681, respectively. NAU is committed to creating multiple pathways to address teacher workforce needs and to helping teachers gain the confidence and the pedagogical expertise to succeed and thrive in the classroom.

Attached are NAU's current education programs and their alignment with the associated Arizona teacher certifications through the Arizona Department of Education (Attachment 2). Those highlighted reflect opportunities for graduates to demonstrate that they have graduated from the NAU program and obtain an Arizona teacher certification upon successfully providing a fingerprint clearance card and passing the state's required licensure exams. The other pathways represent alternative options for students to accumulate coursework and work experience, which must be evaluated and approved by the Arizona Department of Education and be consistent with their certification rules.

After a program analysis and data review conducted to address the declining enrollment in NAU's College of Education, one of the first steps taken was to engage in a process review of our graduate application to enrollment journey from the student's perspective. This analysis included both internal and external reviewers and it was determined that the vast number of education programs at NAU included a complicated system of individual program applications with unique components and requirements. At my direction, a team of individuals from the College of Education, Admissions, and Student Affairs, with the assistance of an outside expert, spent significant time in Spring 2016 to inventory these requirements and move to a simplified application process by Fall 2017. This was one of the first programs addressed in the Graduate College application streamlining and simplification initiative. This effort successfully concluded with the adoption of a single application for all programs rather than the multitude of applications that existed for the various education programs with unique requirements for each. There is now one single application, available in one setting online where unofficial transcripts can be electronically uploaded. If a student has a fingerprint clearance card or a current teaching certificate, they can upload that as well but it is not required for admissions. The streamlined process can be completed in 30 minutes and the response time for admission to the program has been reduced to 24 hours. Once admitted, students can register for courses within one day as long as the schedule is open.

NAU's secondary education programs are taught primarily in the content area college with pedagogy classes taught by the College of Education. For example, a student pursuing a degree/career as a

secondary math teacher will major in Mathematics. This structure continues to be a current and successful practice for ensuring that secondary education professionals are content experts first. Additionally, it is consistent with certification practices that allow for individuals who have work experience and a degree in a content field to obtain a secondary education certification to teach in an Arizona school.

NAU's BSED/BMED Programs leading to Secondary Education Standard Certificate include the following:

College of Arts & Letters

- Art Education - Major (BSED) (also Arts Education, PreK-12 Certificate)
- Music Secondary Education - Major (BMED) (also Arts Education, PreK-12 Certificate)
- Secondary Education - English - Major (BSED)
- Secondary Education - French - Major (BSED) (Discontinued as of AY 18-19)
- Secondary Education - German - Major (BSED) (Discontinued as of AY 18-19)
- Secondary Education - History and Social Studies - Major (BSED)
- Secondary Education - Spanish - Major (BSED)

College of Engineering, Forestry, and Natural Sciences

- Secondary Education - Biology - Major (BSED)
- Secondary Education - Chemistry - Major (BSED)
- Secondary Education - Earth Science - Major (BSED)
- Secondary Education - General Science - Major (BSED)
- Secondary Education - Physics - Major (BSED)
- Secondary Education - Mathematics - Major (BSED)

College of Health and Human Services

- Health Sciences - Physical Education - Major (BSED) (also Physical Education, PreK-12 Certificate)

It is important to highlight the elimination of two secondary education degrees in French and German effective this academic year. NAU has determined that it is no longer practical to offer these options due to the low number of students enrolled and the lack of market demand.

In 2003, after careful evaluation of programming and organizational structure, the Center for Science Teaching and Learning (CSTL) was created to focus on the preparation and continuing education of K12 science educators. In 2008, the Center received a grant to expand the model to include math and define the program after the highly successful UTeach Program designed at the University of Texas, Austin. NAU Teach is a field-based certification program for future science and math teachers committed to teach in Arizona. This program exposes math and science majors to the possibility of becoming a teacher by incentivizing them to take the courses necessary for certification and introduces them to instruction and pedagogical techniques in the K12 classroom setting. The goal is to attract individuals with a passion for math and science to the teaching field who might not have originally thought about teaching as a profession. CSTL has further expanded its programming to offer professional development opportunities to current education professionals, including assistance with implementing the Next Generation Science Standards adopted by the state and required by all public schools in Arizona. These programs can be utilized by individual teachers, schools, or school districts to assist with curriculum development, investigation, and workshop practices and assessment. Since 2008, over 550 educators have participated in continued professional development opportunities through CSTL. Over 80% of these events extend beyond 5-days demonstrating the commitment of both the Center and the individuals. The majority of the educators (70%) are from rural schools (outside of Maricopa and Pima counties) and the majority are from high poverty/Title I schools (77%).

NAU's Teachers' Academy is the latest initiative in NAU's ongoing effort to meet Arizona's need for highly qualified teachers. This is more difficult in many areas of the state served by NAU, particularly

rural and inner city schools. To address these challenges, NAU has partnered with local community colleges, school districts, and county school superintendents to stretch our initiative across the state. NAU will offer its NAU Teachers' Academy at eight sites in Fall 2018, with Yuma as the newest site enrolling students. Other sites include Mohave Community College/Kingman, Northland Pioneer College, Eastern Arizona College, Yavapai College, South Mountain Community College, Phoenix College, and our North Valley Office in partnership with Alhambra School District.

In addition to the Grow Your Own partnership programs in our Teachers' Academy, this fall NAU is expanding the Teacher Intern Preparation Program (TIPP) beyond Flagstaff, Yuma, and Yavapai counties to go statewide. This is an alternative pathway to teaching for individuals who already have a bachelor's degree and wish to begin their teaching career immediately. These individuals must also have a school willing to employ them on an intern certificate while they are enrolled in our preparation program. They can teach full-time, with a salary and benefits, and earn a master's degree in elementary education around their work schedule.

Our Dean of the College of Arts and Letters has begun conversations with the Deans of the College of Education and the Graduate College to explore pathways for Liberal Arts majors and graduates who want to select additional opportunities that lead to employability. These majors provide a strong foundation for educating others and we are thus exploring options of 4+1 or 3+2 degrees whereby students would graduate from NAU with a master's degree and teacher certification credentials.

NAU also offers relevant professional development opportunities to current teachers based on the Arizona Teaching Professional Standards and the Arizona Academic Standards. This professional development is primarily organized through the Arizona K12 Center, which was established under NAU in 1999. The K12 Center utilizes NAU's high quality education legacy and its statewide mission and experience to provide access to ongoing professional development to teachers across the state. The K12 Center includes a statewide board that provides guidance and insight to classroom teachers and school leaders on critical education support needs. The K12 Center utilizes the resources of the best and brightest in the field and connects them with teachers across the state through events, programs, coaching, videos, and podcasts. In November 2017, the Arizona K12 Center launched its podcast, *3Ps in a Pod*. This podcast focuses on practice, policy, and passion. In its inaugural year, 23 episodes were launched. To date, there have been 7,244 downloads. In the 2018-2019 school year, the Center is aggressively continuing this work with 32 episodes and accompanying professional learning opportunities for targeted podcasts. Teachers are encouraged to share their stories and help each other tackle challenges ranging from student language barriers and student behavior, to technology integration, academic standards, and assessment. The K12 Center has also developed a Professional Learning Plan for teachers to reflect on the impact of their own learning on improved student outcomes and to utilize this plan to develop meaningful professional development practices. The Arizona K12 Center supports Arizona educators throughout the state with quality professional development. This past year the Center provided face-to-face professional development for 4,140 Arizona teachers.

Initiatives in the K12 Center include the opportunity to earn National Board Certification, which is a highly recognized effort designed to "develop, retain, and recognize accomplished teachers." The Center has supported about 500 teachers each year for the past three years as they pursue National Board Certification, the highest credential in the teaching profession. These teachers have three years to complete the rigorous process of Board certification. This past year, 167 teachers achieved National Board Certification and another 53 successfully renewed their certificate. Arizona is home to 1,376 National Board Certified Teachers. We are 18th in the nation for the total number of NBCTs, 9th in the nation for new NBCTs, and 14th for certificate renewal. NAU has incorporated this process into a

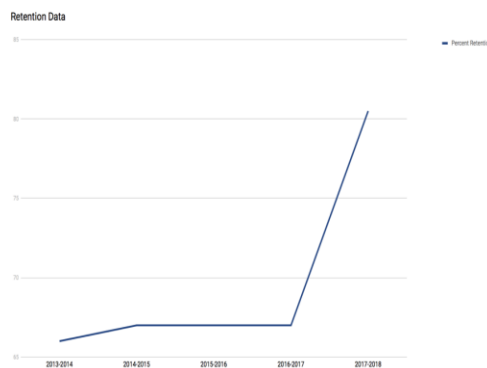
Master’s program that allows students to earn both National Board Certification and their Master’s from NAU simultaneously through this rigorous process.

Finally, the K12 Center also administers Arizona’s Master Teacher program, in partnership with the New Teacher Center. This program provides ongoing professional learning opportunities for those who mentor beginning teachers. School districts participating in the Master Teacher program report beginning teacher retention rates that are above the national average of 50-60%. Even more impressive, the retention rates of mentored teachers in this program are above 70% in six of the seven districts that are receiving Arizona K12 Center funding. The evidence suggests that the Master Teacher Mentor program offers a significant boost to Arizona’s efforts to retain beginning teachers. To illustrate this point, for almost three years, the Cartwright Elementary School District retention rate was around 67%. After initiating this program, the district’s retention rate increased to 81%. This improvement demonstrates how the expertise of the mentors and the sustainability of the program is making a difference in this urban district.

Cartwright Retention Data

As of April 2017 the calculated retention data for beginning teachers in the mentor program was at 80.5%, this shows the 66 of 82 returning mentored beginning teachers for the 2017-2018 school year.

From 2013-2017, the retention rate for beginning teachers was at 67%.



The Arizona K12 Center recently added a new series targeting preservice teachers that supports their university coursework and learning. A new endeavor in the upcoming school year seeks to bring beginning teachers together to build a professional network with other beginning teachers. This network will encourage collaboration with both veteran and new teachers across the state.

NAU has also worked specifically with teachers in tribal schools through a partnership utilizing the Yale National Initiative model, called the Diné Institute. NAU’s Diné Institute for Navajo Nation Educators completed its first application cycle this spring and seminars for the first cohort began this summer with content-specific professional development provided by NAU faculty that has been selected by Diné teachers as areas of need that are both culturally responsive and aligned to state standards. The Diné teachers have committed to a minimum of three years of continued service to schools on the Navajo Nation. The Diné Institute pairs NAU faculty with K12 educators to develop rigorous curricula through a series of collaborative seminars. The Institute is teacher-driven and utilizes culturally-responsive pedagogies to strengthen teaching and learning, better preparing students for postsecondary education.

My personal connections have come through meetings and conversations with county school superintendents, local community school principals, superintendents in several communities we serve—including Flagstaff, Yuma, and Prescott—and with various charter school leaders regarding challenges related to educating qualified teachers as well as curricula. I am a member of the Launch Flagstaff community leadership council, which works to enhance school preparedness and improve outcomes for

K12 students in northern Arizona. I also am involved in the United Way of Northern Arizona's early childhood education efforts, including the KinderCare program that aims to boost childhood education. I have also engaged closely with educators and students throughout Arizona and participated in events, spoken at convocations and graduations, and visited local schools to meet with teachers, administrators, and students. I have heard on many occasions that while all new teachers require additional preparation, NAU's graduates enter the classroom knowledgeable of the standards and able to manage the challenges of today's classroom environment. We will continue to build on our historic strengths of educating teachers and serving communities across our state, and I look forward to updating the board on our progress toward meeting the ABOR metrics, fulfilling the Achieve60AZ goals, and working with statewide communities and partners to improve education throughout Arizona.

USES OF INCREMENTAL GENERAL PURPOSE FUNDS TO SUPPORT 2025 GOALS

| Uses of Incremental Resources | \$M |
|---|---------------|
| Enrollment Growth – Student Success | 3.0 |
| High Demand Degree Growth- Allied Health, Engineering, PhD programs | 1.4 |
| Student Financial Aid | 12.4 |
| Retention and Recruitment of Faculty and Staff including ERE | 3.5 |
| Online Education Investment | 1.1 |
| Facility and Technology Infrastructure | 4.3 |
| Research Enterprise Investment | 1.2 |
| Athletics Program Investment | 3.2 |
| Economic Policy Institute | 0.5 |
| Strategic Reallocations | (3.5) |
| Total Strategic Investments | \$27.1 |

Attachment 2. NAU Teacher Preparation Programs Alignment to Arizona State Teaching Certificates

| Certificate | Ages/Grade | Program Option A | Program Option B | Program Option B variation/or additional requirement | NAU Applicable Degrees |
|---|--------------------------------|--|--|---|---|
| STANDARD PROFESSIONAL EARLY CHILDHOOD EDUCATION CERTIFICATE | BIRTH THROUGH AGE 8 OR GRADE 3 | Teacher preparation program in Early Childhood (either board approved or accredited) | 37 Early Childhood Education semester hours of courses plus 4 semester hours of field work and 4 semester hours student teaching serving birth through grade 3 | Two years of verified fulltime teaching experience with one year in birth through 3 and one in k-3 may be substituted for the 8 semester hours of practicum | -BSED Early Childhood Education -Early Childhood Education, Undergraduate Certificate -BSED Unified Early Childhood Education and Early Childhood Special Education |
| STANDARD PROFESSIONAL ELEMENTARY CERTIFICATE | K-8 | Teacher preparation program in Elementary Ed (either board approved or accredited) | 45 semester hours of courses plus 4 semester hours of field work and 4 semester hours student teaching | Two years of verified fulltime teaching experience in grades Prekindergarten - 8 may be substituted for the 8 semester hours of practicum | -BSED Elementary Education -BSED Special and Elementary Education -MED Elementary Education - Certification |
| STANDARD PROFESSIONAL SECONDARY CERTIFICATE | 6-12 | Teacher preparation program in Secondary Ed (either board approved or accredited) | 30 semester hours of education courses including at least 8 semester hours of practicum in grades 6-12 | Two years of verified fulltime teaching experience in grades 6 through postsecondary may be substituted for the 8 semester hours of practicum | -BSED/BMED Secondary Education (see listing of programs below) -MED Secondary Education (program being revised; currently not accepting students) -MA Secondary Education, English -MAT Secondary Education, Spanish Education -MAT Teaching Science with Certification |
| SPECIALIZED SECONDARY STEM | 6-12 | A Bachelor's, Master's, or Doctoral degree | Verified teaching experience for the last two | Verification of at least five years of work experience in | Any NAU alumni with a STEM degree who have |

| | | | | | |
|--|--------------------------------|---|--|---|---|
| CERTIFICATE | | and completion of twenty four semester hours of coursework in an academic subject that is specific to science, technology, engineering or mathematics from an accredited institution | consecutive years, and for a total of at least three years at one or more accredited postsecondary institutions in science, technology, engineering or mathematics. | a science, technology, engineering, or mathematics | 5 years of work experience in science, technology, engineering, or mathematics and can obtain verification from a Supervisor or Human Resources would qualify for this certificate. |
| SUBJECT MATTER EXPERT STANDARD TEACHING, 6-12 | 6-12 | Postsecondary Teaching Experience: Verified teaching experience for the last two consecutive years and for a total of at least three years, at one or more regionally or nationally accredited postsecondary institutions in the applicable subject area of certification | A Bachelor's, Master's or Doctoral degree from an accredited institution in a relevant content area. | Verified work experience of five or more years in the applicable subject area of certification. | Many NAU bachelor's degree graduates who have 5 years verifiable work experience in the subject area would qualify for this certificate. |
| STANDARD EARLY CHILDHOOD SPECIAL EDUCATION, BIRTH – AGE 8 OR GRADE 3 CERTIFICATE | BIRTH THROUGH AGE 8 OR GRADE 3 | Teacher preparation program in Early Childhood Special Education (either board approved or accredited) | 37 Early Childhood Special Education semester hours of courses plus 4 semester hours of field work and 4 semester hours student teaching serving birth through grade 3 | Two years of verified fulltime teaching experience in qualified settings with one year in birth through 3 and one in k-3 may be substituted for the 8 semester hours of practicum | -BSED Unified Early Childhood Education and Early Childhood Special Education (Fall 2018) -MED Special Education - Early Childhood Special Education with Certification |
| STANDARD MILD-MODERATE DISABILITIES SPECIAL EDUCATION, K – 12 CERTIFICATE | K-12 | Teacher preparation program in Special Education Mild Moderate Disabilities (either | 45 semester hours of courses plus 4 semester hours of field work and 4 semester hours | Two years of verified fulltime teaching experience in mild-moderate special education, grades | -BSED Special and Elementary Education -MED Special Education – Mild Moderate |

| | | | | | |
|-----------------------------|------|---|--|--|--|
| | | board approved or accredited) | student teaching | K-12 may be substituted for the 8 semester hours of practicum | Disabilities Certified |
| TEACHING INTERN CERTIFICATE | K-12 | Official transcripts documenting a Bachelor's or more advanced degree from an accredited institution. | Completion of requirements for degree program leading to certification | Candidate obtains teaching contract with school and simultaneously is enrolled in a qualified degree program | NAU currently accepts Teaching Intern Certificate candidates in the following programs: -MED Elementary Education – Certification -MED Special Education - Early Childhood Special Education with Certification -MED Special Education – Mild Moderate Disabilities Certified |

*Highlighted program options reflect opportunities for graduates to demonstrate that they have graduated from the NAU program and obtain an Arizona teacher certification upon successfully providing a fingerprint clearance card and passing the state's required licensure exams.

*Students cannot graduate through our Institutional Recommendation (IR) through the Arizona Department of Education programs if this option is selected since student teaching is a catalog requirement. Individuals pursuing this option would not qualify for an IR.

2017-18 Graduate Education and Research: Executive Summary

Enclosed is NAU's comprehensive plan evaluating the current organizational structure of the Graduate College and graduate education at NAU. This plan includes proposed refinements, as well as initiatives already underway to improve systems and processes that meet the expectations of the 2017-2018 performance goal. Information is provided identifying how NAU's priority research investments and associated faculty recruitment correspond with graduate education strategic planning. Completing the plan is the alignment of NAU's graduate education, research investment, and strategic plans to meet the ABOR 2025 goals.

Graduate education is an integral component of NAU's 2025 metrics, including attainment of graduate enrollment, graduate degrees awarded, total enrollment, degrees in high demand fields, and research and public service activity goals. NAU is on-track to meet our graduate education enrollment and degrees awarded metrics, which contribute to our attainment of the overall 2025 goals. However, we must be diligent to ensure that our graduate programs are strategically positioned to have sustainable, long-term growth and that our investments in faculty, programs, and infrastructure are targeted and impactful. We have looked holistically at our enrollment plan and our research development and investment strategies to integrate and maximize the talent we attract, the structure under which we operate, and the resources we allocate.

While NAU's undergraduate enrollment has been on a steep incline over the last decade, NAU's graduate enrollment has varied by campus and delivery model over this same timeframe (trends are enumerated in the attached plan). NAU strategically invested in expanding graduate education on the Phoenix Biomedical Campus, which has contributed significantly to meeting the metrics. The negative change in graduate enrollment at NAU's statewide community campuses, including Yuma, is attributed to two primary factors: a large drop in education-related graduate degrees and a shift in commitment from community presence to online education. NAU's overall drop in statewide/Extended Campus presence and relationships has been addressed in past reports and reorganizations through the One NAU initiative and key leadership changes. Enrollment in online graduate education has steadily increased as attention has been given to this area and programs shifted to an online delivery model; however these programs are currently in need of further strategic development. The hiring of a Dean of Online and Innovative Educational Initiatives is focused on this effort. In addition, our work with Hannover Research and Lipman Hearne has expanded our market research and understanding of workforce needs, leading to the development of targeted graduate programs. Our efforts toward targeted, strategic growth are evident in enrollment and graduation trends from our doctoral programs. In the past 10 years, enrollment across all PhD and professional doctorate programs, as well as the terminal MFA degree program, have increased by 78%, and degrees awarded in these programs have increased by 89% over the same period.

In the past graduate education programs were developed individually by faculty without consideration to the overall enrollment goals of the university, strategic investments necessary for success, scalability opportunities, best delivery options to meet the widest student access or workforce needs, and, in many instances, the program's relationship to research and public service opportunities. Through the shift in responsibilities, planning processes, use of technology, and collaboration, the model for establishing graduate programs at NAU has changed significantly.

Through an extension of the One NAU initiative, we evaluated the efficiency of separate systems for graduate student recruitment and admissions processes. While recognizing that there are significant differences in the mechanisms and messaging, there is value to maximizing the systems and platforms

we have built and expanded to support our undergraduate recruitment, communication, and admissions efforts. Though still in progress, several functions are being moved to a centralized services unit within NAU's Enrollment Management and Student Affairs. Streamlining the business practices and maximizing the student experience through our One NAU initiative has now successfully expanded to include graduate education. The Graduate College will also be migrating to the CRM platforms (Salesforce and Peoplesoft) utilized by the rest of the university to manage student communications, further streamlining both our technology use and student experience.

By removing some of the process and business functions from the Graduate College, additional leadership expectations were established for the Dean of the Graduate College to engage with NAU's other deans to drive student-centered practices and enhanced program development planning. Already in progress are new standardized and simplified application processes that serve our prospective graduate students in a more student-centered and competitive model. In addition, the Graduate College Dean has been empowered to work with colleges and individual faculty to enhance progress on developing new graduate degrees in a more timely manner, consistent with NAU's strategic research strengths and areas of academic emphasis. This proactive model brings the strengths of the entire university to the conversation and enhances the dialogue regarding research potential, student demand, and workforce needs. Representing a complete shift from the longstanding approach, yet consistent with my philosophy since coming to NAU to streamline business practices, develop efficiencies, and establish increased collaboration, the progress on this effort is a culmination of many initiatives.

Concluding with an update specific to the research enterprise, and its integration with graduate education, the report outlines how NAU is on track to exceed its 2025 research goal due to careful planning, strategic areas of expansion and investment, and new areas of emphasis and critical high research hires. NAU's research portfolio has increased from \$30.5M to \$52.9M over the last five years. The breadth of granting agencies has also diversified and the largest grants to NAU in FY18 came from the following agencies: the National Science Foundation (NSF), the U.S. Department of Health and Human Services (HHS), and the U.S. Department of Agriculture (USDA).

NAU has identified priority areas for research by building on its historical strengths and through the establishment of new collaborative centers that pull resources from various colleges and departments, making us more competitive for grants. This contributes to our vision of developing new areas of graduate education as well. However, these will not be the only areas we develop graduate education programs. We also continue to assess areas with critical workforce needs which, while they may not align directly with our research mission and existing strengths, are of central importance to the State of Arizona and are responsive to the demands of our students and the 21st century workforce. Examples of this are the new Master of Public Health (MPH), Master of Social Work, PhD in combined Counseling/School Psychology, Master of Science in Athletic Training, two Personalized Learning masters programs in Nursing and Computer Information Technology, and planned degrees in Engineering. Over the last two years, the addition of new academic graduate programs, which have aligned with key research hires, include our School of Informatics, Computing, and Cyber Systems to support the growing science of informatics applied to biosciences, ecology, the environment, health, and astronomy, all of which are key areas of research growth in which NAU has invested. Additionally, the dark skies of Flagstaff and Arizona's rich history of astronomical discovery have been the impetus for expanding NAU's astronomy and planetary science programs, where we have added a new PhD program and attracted new research faculty to support both academic programs and research growth.

NAU will continue to recruit, develop, and celebrate outstanding individual performers in research and scholarly activity, but we recognize that pathways to impactful and sustainable research programs also

depend on building groups of faculty members of all ranks and tracks that work together and seek multi-investigator, multi-disciplinary, and multi-institutional support. For example, our seven major research centers, or institutes, account for approximately 45% of NAU's total annual research expenditures and contribute directly to graduate education

Maintaining a robust effort in strategic and research-active hires that fit into NAU's core and emerging academic and research focus areas, enhancing our national reputation and success, and building our academic community are key to NAU's overall success. Faculty hires over the last five years that are targeted to meet both our research growth expectations and support our academic excellence and commitment to student success are reflected in the attached report. These hires, made with support directly from a prioritized and focused effort by the President and the Vice President for Research to target university resources and TRIF from 2014 to the present, complement an already existing core of faculty who are leaders in their fields with nationally and internationally recognized achievement in research and creative scholarship.

NAU's establishment of a separate College of Engineering, Informatics, and Applied Sciences (CEIAS) was a critical and deliberate initiative to empower both the research capabilities and academic expansion for our engineering and informatics programs. It will also allow the natural sciences and forestry programs to grow and have focused leadership with defined strengths. NAU anticipates significantly expanding and developing new academic degree opportunities aimed at high-demand jobs and research in high-impact areas of technology, engineering, and applied science. Targeted graduate degree programs have already been developed and approved by ABOR that take advantage of this synergy of research and education success in informatics and bioengineering, and more are on the horizon. These will include postgraduate certificate programs and more 4+1 and 3+2 programs aligned with workforce expectations.

The relationship between the academic units led by the Office of the Provost and the Vice President of Research have been solidified through our leadership team and will continue as NAU conducts a national search for a permanent Provost. Additional interdisciplinary team development will be encouraged through infrastructure planning and development, as well as strategic hiring decisions and resource allocations. We will remain focused on building on NAU's historical mission of providing access and meeting workforce needs of Arizona and beyond.

2017-18 Graduate Education and Research

Graduate education plays an important role at Northern Arizona University, supporting our primary mission of providing outstanding undergraduate education, fueling the institution's research agenda, and providing important workforce preparation. Established in 1899 as the Northern Arizona Normal College, NAU has a strong history in the field of teacher preparation. Until 1946, NAU offered degrees exclusively in the field of education. By 1966, when the institution was first recognized as a university, NAU had developed a degree in Education Specialties, as well as master's degree programs in the sciences. The first NAU doctoral program, the PhD in Biological Sciences, was established in 1970, with the first degree awarded in 1974. Since this time, the number of graduate degree and certificate programs has expanded to over 100, with 15 doctoral degrees offered in 2018. This growth has accompanied dramatic expansion of research productivity in numerous disciplines, especially within the STEM disciplines.

From the inception of graduate education at NAU, we have committed to providing outstanding academic preparation and an exceptional experience for students. While the ABOR metrics include specific goals for graduate degrees awarded, until recently NAU was not collectively focused on how graduate enrollment contributed to the overall university Strategic Enrollment Plan nor the gains necessary to meet the 2025 metrics. This is especially true for doctoral programs, many of which were planned by faculty at their inception to remain relatively small. For many years, graduate programming at NAU appeared to follow a "build it and they will come" model for managing enrollment. Throughout much of the end of the 20th century, enrollments in education programs across the country were strong and growing; this was certainly true at NAU, where these programs made up the vast majority of graduate student enrollment. Subsequently, there have been dramatic changes in the pursuit of graduate degrees in education that have impacted universities across the country, and NAU is no exception. For example, following national trends, our education enrollments have dropped precipitously in the last decade. During this time, NAU did not diversify its portfolio or expand its boutique programs to adjust to this change and thus overall graduate education enrollment numbers for the university have declined despite strategic investments and targeted growth in specific areas.

During this same period, NAU's research agenda expanded and grew in stature and productivity. These efforts align the recruitment of highly productive research faculty in several high impact disciplines, establishment of high profile research centers, and substantial globalization of the institution with the potential to expand current graduate programs further and build additional programs. Current enrollment planning efforts recognize that it is critical that we seize this opportunity, maximize institutional investment in these areas, and focus on the synergy between education and research. This is a cornerstone of NAU's model and one that is visible in many key areas that must be scaled where possible.

Overall NAU Graduate Enrollment Trends:

The following figure shows graduate enrollment trends by campus. Because NAU's programming is so dispersed by location and delivery model, it is critical to disaggregate the data in evaluating trends and areas for improvement. These data indicate that while online enrollments have grown by approximately 50% since 2008, Flagstaff Mountain Campus graduate enrollment has declined by over 150 students since 2008 and an even greater number since the high point in 2009, despite the addition of new programs over the last four years. Furthermore, graduate enrollments at our statewide community campuses, including Yuma, have declined significantly over the past decade. Some of this shift from statewide sites to online education is believed to have been an intentional shift in policy to move increased enrollments online, but the decline in statewide sites is likely more severe than anticipated

and not made up for by online enrollments. Online education at NAU grew during the past decade in part due to the development of innovative online educational strategies, such as NAU’s competency-based Personalized Learning (PL) program. While PL targeted undergraduates at the time, it also established NAU as a leader in online education broadly, including graduate programs. More recently, online program enrollments have largely plateaued and some have decreased, in part due to a lack of attention to online offerings overall, including, their promotion, during a time of transition. The Phoenix Biomedical Campus was an important initiative for NAU in many ways, including for our graduate education portfolio. External factors contributing to graduate enrollment growth challenges include national down trending in education-related graduate programs, national economic recovery discouraging potential students from graduate study, and the national discourse surrounding student debt. These external factors do not excuse the lack of planning and attention to trends which occurred at NAU, particularly on the Flagstaff Campus.

| NAU Graduate Enrollment Trends by Campus | | | | | | | | | | |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Flagstaff | 1,533 | 1,660 | 1,598 | 1,523 | 1,461 | 1,412 | 1,426 | 1,517 | 1,493 | 1,382 |
| PBC | n/a | n/a | n/a | n/a | 49 | 100 | 184 | 255 | 314 | 364 |
| Online | 1,056 | 1,021 | 1,088 | 1,209 | 1,289 | 1,227 | 1,239 | 1,304 | 1,329 | 1,506 |
| CommCamp | 2,639 | 2,273 | 1,965 | 1,683 | 1,243 | 1,022 | 855 | 679 | 608 | 633 |
| Yuma | 191 | 154 | 151 | 110 | 101 | 91 | 89 | 64 | 55 | 28 |

With respect to degree completion rates for NAU graduate students, master’s degrees awarded to Flagstaff Mountain Campus students in FY 2018 were lower than any year since FY 2009, while doctoral degrees have increased steadily over time. The majority of doctoral degrees conferred annually are professional doctorates earned through programs in the College of Health and Human Services. Our efforts toward targeted, strategic growth are most evident in 10-year enrollment and graduation numbers in PhD and professional doctorate programs. In the past 10 years, enrollment across all PhD and professional doctorate programs, as well as the terminal MFA degree program, have increased by 78%, and degrees awarded in these programs have increased by 89% over the same period. Online master’s degree completions have similarly grown over recent years, but dropped back to numbers observed 5 to 6 years ago. Online doctoral degrees have been low up to this point, due in part to the limited number of online doctoral programs offered by NAU. Statewide community campus master’s degree completions have dropped significantly over the past decade, and doctoral degrees have vacillated, although they have never ranged higher than 10 to 20.

| NAU graduate enrollment trends by college | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| CAL | 291 | 315 | 363 | 361 | 375 | 362 | 350 | 325 | 291 | 292 |
| COE | 3,591 | 3,157 | 2,805 | 2,544 | 2,100 | 1,737 | 1,615 | 1,601 | 1,644 | 1,732 |
| CEFNS | 359 | 363 | 363 | 354 | 366 | 382 | 416 | 431 | 447 | 469 |
| HHS | 288 | 287 | 366 | 378 | 465 | 545 | 645 | 739 | 799 | 869 |
| SBS | 356 | 366 | 376 | 365 | 359 | 357 | 320 | 319 | 292 | 263 |
| Online | 305 | 343 | 321 | 333 | 326 | 302 | 296 | 271 | 232 | 211 |
| FCB | 37 | 35 | 28 | 31 | 32 | 34 | 43 | 39 | 32 | 27 |

With respect to international graduate enrollments, NAU’s experience runs opposite to the national trend of decline. Our international enrollment increased by 55% in the last five years. As of fall 2018, 3.8% of NAU’s enrolled graduate students were international students. International education has been a strategic initiative for NAU that has contributed to the success in graduate enrollments among this population.

| Graduate INTL | Fall | | | | | |
|-----------------------|------|------|------|------|------|---------|
| INTL Enrollment | 2013 | 2014 | 2015 | 2016 | 2017 | %change |
| International | 98 | 100 | 96 | 121 | 152 | 55.1 % |
| % of total enrollment | 2.5% | 2.6% | 2.5% | 3.1% | 3.8% | |

Recognizing the responsibility to offer graduate-level educational opportunities to more students through enrollment growth, shepherd more students to degree completion, and ensure that best practices in graduate education are followed at NAU, we have developed internal task forces to routinely review graduate enrollment information and discuss strategies across institutional divisions, expanded outreach to national organizations for best practices, and sought guidance from external consultants.

Significant changes in organizational structure and leadership occurred during the past several years that had an impact on the institution’s graduate student enrollment in Online and (former) Extended Campus programs. Changes included a complete reorganization of the former Extended Campus structure and leadership team, institutional changes to marketing leadership and approach, and, most recently, organizational changes to support on-campus graduate programs and operational admissions support. NAU made intentional decisions to have a One NAU focus, supporting all programs at the institutional level rather than operating disparate units, which had resulted in inefficiencies, reduced brand awareness, and declining enrollments in several units. After replacing leadership and developing a collaborative mentality, NAU is well on its way to rebuilding an integrated statewide and online education practice that can operate efficiently. Key to this effort included the formation of the division of NAU Online and Innovative Educational Initiatives, which includes academic development, growth, and policy oversight for online and Personalized Learning (PL) programs. In partnership with NAU’s Education Partnerships Office, this division will also work to rebuild NAU’s statewide community campus program offerings. A new Dean was hired in Spring 2018 to create the strategic plan for growing programs offered in these modalities.

In addition, a new Chief Marketing Officer was hired in summer 2017 and has been working to revise the institutional approach for marketing to ensure a more comprehensive and strategic approach to lead generation. Marketing, in conjunction with enrollment management and a cross-stakeholder group, has been working on updating the student experience from inquiry through enrollment to ensure the journey to becoming a student at NAU is more streamlined.

The academic leadership now understands that the university must actively promote opportunities for graduate education to a much larger group of students. Graduate education has a strategic place within the overall strategic enrollment plan, with the Graduate College contributing to our broader goals. Understanding that the passive approach of the past resulted in institutional competitors recruiting higher quality students away from NAU—not because of the quality of their programs, but because we were not focused on recruiting these same students and attention was not paid to process and response times—has been critical for helping our academic leadership move forward with making systemic changes.

Assessment and refinement of the organizational structure of graduate education has included thorough analysis of structure, process, and practice, employing the expertise of external consultants, such as the Hanover Research Group and Lipman Hearne. We have begun redefining roles and responsibilities in the areas of marketing and recruitment as well as admissions and applications processing. Several of these functionalities are being consolidated in different units, such as the Office of Enrollment Management and Student Affairs, the Center for International Education (CIE), and the NAU Marketing Department. We have launched projects to streamline graduate application requirements and processing in order to move from a faculty-centric to a student-centric application process. We have also worked closely with academic units and CIE to improve processes and practices through which international graduate students can access educational opportunities at NAU.

NAU Graduate College: Organizational Structure

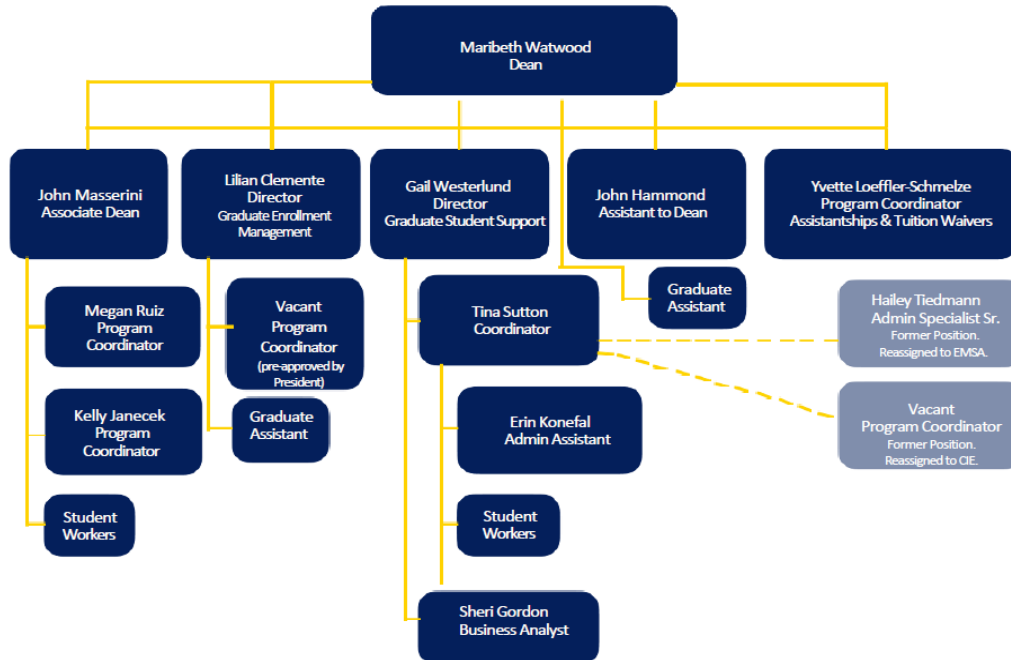
Graduate education at NAU was administered through the Office of Research and Graduate Education until 2006, when the two units split into the Office of Research and the Graduate College.

The Graduate College team collaborates with NAU faculty and graduate program leadership to develop optimal graduate programming, support graduate enrollment initiatives, maintain appropriate standards of academic rigor, support graduate students throughout their careers at NAU, and provide meaningful professional development opportunities to advance students' careers upon completion. The Graduate College is also a voice of advocacy for graduate education across the institution and nationally through participation and leadership in the national Council of Graduate Schools and the Western Association of Graduate Schools.

The Graduate College operates using a model of collaboration in order to support the most robust experiences and outcomes for NAU students. The college regularly engages with deans, chairs, faculty, and students that represent the seven academic colleges. Additionally, the Graduate College collaborates with other units on campus to support the graduate student experience, including CIE, the Office of Online and Innovative Educational Initiatives, the Office of Research, Enrollment Management and Student Affairs, and more. The range of relationships and the deep nature of these interactions make the Graduate College one of the most collaborative units at NAU. While it has operated as a liaison among its peers, however, it is critical that there be areas for the Graduate College to take on a leadership role, not just a collaborative role, in order to accomplish the goals and metrics.

The current organizational structure of the Graduate College is shown below. Changes in roles and

responsibilities associated with NAU graduate education are described throughout this report, and reassignments are shown below.



Organizational structure relative to programming at Online and Community campuses:

Graduate programming offered through the Flagstaff Mountain Campus, Online, and Statewide Community Campuses all fall under the general umbrella of NAU graduate education. The Graduate College has oversight roles for programs and students associated with all campuses. These roles include responsibility for student progression milestones, such as comprehensive exams, doctoral candidacy, thesis and dissertation defenses, and the like, as well as resolving difficult situations involving individual students. The Graduate College’s leadership extends to online and statewide community campus programs, but formal supervision is provided for these programs by the Dean of Online and Innovative Educational Initiatives and graduate education at the Yuma campus falls under the direction of the Associate Vice Provost and Campus Executive Officer. Under the One NAU model, statewide community campuses and online education work with the Flagstaff campus units, including the Graduate College, to more closely align goals, processes, and practices with a more cohesive experience for students across all campuses and delivery models. These changes are reflected in everything from the external facing NAU website to internal business processes.

National Trends in Graduate Education:

The Council of Graduate Schools (CGS), graduate education’s national professional organization, conducts continuous research into many aspects of graduate education trends and best practices. The organization examines a wide range of issues, including academic quality, representation of diverse populations in graduate programs, professional development best practices, career opportunities, and enrollment trends. Together with the Institute of International Education, CGS has gathered and published observations relative to national and international graduate enrollment trends which our team has compiled and reviewed for consideration during this work. It was important for the team to understand that across the U.S., while there are institutional differences, the trends were stable with continued growth overall in first time applicants in master’s degree programs. This includes growth

among underrepresented minority groups, which continues to be a priority for NAU as we work to reflect the diversity of Arizona's population. Students from underrepresented minority groups now make up 23.4% of first-year graduate students who are U.S. citizens or permanent residents. (Source: GCS, *Healthy Growth in Master's Enrollment Continues at U.S. Graduate Schools*, [link](#)). As we evaluate the future, I have asked my team to look at graduate certificates and micro-credentials, as national trends show that a growing number of students see value in these credentials.

It is no surprise that the largest one-year increases in graduate applications occurred in the fields of mathematics and computer sciences (5.5%), physical and earth sciences (5.0%), business (3.2%), and biological and agricultural sciences (3.1%). Graduate applications in arts and humanities decreased 6.2% from fall 2015 to fall 2016. (Source: CGS, *Press Release*, [link](#)). Health Sciences have also seen a robust increase in awards of both master's degrees (13.7%) and doctoral degrees (9.5%). (Source: CGS, *For First Time in over a Decade, International Graduate Applications and Enrollments Decline at U.S. Institutions*, [link](#)). Similar to what NAU is beginning to see as a very slight uptick, first-time graduate enrollment nationally in Education increased both at the master's level (2.3%) and the doctoral level (3.0%) from fall 2015 to fall 2016. (Source: CGS, *Healthy Growth in Master's Enrollment Continues at U.S. Graduate Schools*, [link](#)). This must be watched closely, however, and we cannot, nor should we, return to relying solely on Education to bolster our graduate enrollment.

Observations and Recommendations from Internal Task Force:

In 2015, an NAU task force was convened to examine aspects of graduate education and make recommendations. Task force members included Graduate College and Provost Office representation as well as the academic deans. Programs across the institution were considered for alignment with NAU's Strategic Plan and opportunities for program development or elimination. Financial support available for graduate students was also considered in this study. The task force's primary recommendations were to increase the number of graduate degrees awarded through enhanced recruitment, increase pathways for undergraduates to enter graduate school, increase retention, and reduce time to degree. The task force also encouraged a review of extant programs to ensure alignment with workforce demand and institutional mission. Further, the group advised expansion of interdisciplinary offerings and increased financial resources for graduate students.

Review and Recommendations from External Partners:

In order to identify further areas for improvement in graduate programming and enrollments, NAU has enlisted the services of external partners, including Lipman Hearne and Hanover Research.

In 2017, NAU partnered with Lipman Hearne to complete a study on graduate and online recruitment. The firm gathered information from a variety of sources, including recent graduate enrollment growth goals and results, the graduate component of NAU's Strategic Enrollment Management Plan, Graduate College budget information, workflow analysis, social media analysis, and an inventory of programmatic offerings. Lipman Hearne's assessment and major recommendations included that 1) NAU must adopt a more student-centric approach to graduate education, 2) enrollment planning must be more sophisticated, and siloed approaches must be more unified, and 3) coordinated communication throughout the entire student experience is needed.

In 2018, NAU partnered with Hanover Research to conduct a study comparing graduate education at NAU with other similar institutions. While this work is ongoing, the firm has made preliminary observations indicating that NAU should strengthen collaborations between the Graduate College and academic program leadership in order to best serve students. They also suggested that we consider the use of an external vendor to identify programmatic areas ripe for new offerings to be developed.

Prioritized strategies for graduate enrollment growth:

Responding to the challenges of growing graduate enrollments as well as the targeted feedback from external reviewers and the internal task force, NAU is embracing numerous opportunities to grow enrollments, facilitated by the One NAU model.

One outstanding opportunity to advance our graduate enrollment goals is the establishment of the College of Engineering, Informatics, and Applied Sciences. This new college will provide strong opportunities for recruitment and enrollment of students in high demand fields. Importantly, two new PhD programs in mechanical engineering and material science are in the planning stages, with launches planned for 2019.

Developing additional graduate programs in the health sciences and boosting capacity for existing health programs, both at the Phoenix Biomedical Campus and the Flagstaff Mountain Campus, will expand opportunities for students in these high demand fields and also contributes to the overall graduate enrollment strategic plan. Evaluation of workforce needs is underway in partnership with industry leaders.

Developing additional PhD programs in response to market demand and institutional mission, especially in STEM fields, will help increase our research productivity consistent with the ABOR 2025 metrics and continue to solidify NAU's Carnegie rankings. With more PhD programs, we must also realize increased interest in Master's degrees as a gateway to the PhD, and as entry-level credentials for the positions in numerous sectors. These programs and strategic faculty hires will be evaluated in partnership with NAU's strategic areas of research strengths.

Online growth is essential to achieving our goals and is built into NAU's enrollment strategic plan. Strategic marketing paired with graduate curriculum development will be necessary to fully develop this area of the plan. Development of new programs will be pursued in close collaboration between Online and Innovative Educational Initiatives, the Graduate College, and individual academic programs, in keeping with the One NAU philosophy of optimally serving our students.

Graduate Recruitment:

We have moved away from a somewhat colloquial model of a single Graduate College staff member overseeing marketing and recruitment efforts to a more professional and efficient model, which appropriately seats marketing efforts within our centralized Marketing Department. In these efforts, Marketing works closely with academic programs and the Graduate College in order to develop the most effective approaches for attracting students to NAU. These are key examples of adopting a collaborative, One NAU approach for this important work. Current recruitment efforts include purchasing name lists from GMAT and other graduate oriented organizations, targeted social media campaigns, and targeted mail and call communications. NAU continues to be regularly represented at recruitment fairs across the country and internationally through a combination of student affairs and faculty representatives. We are working actively with graduate program faculty to increase their role in the recruitment of students in their disciplines at professional conferences and providing them with the tools and materials to succeed in this effort.

Engaging NAU faculty, staff, deans, and chairs in graduate enrollment growth

While considerable investment into the quality and academic rigor of graduate programs at NAU has been made consistently over time, historically, less attention has been focused on graduate student recruitment, enrollment stability, and growth. As a result, many faculty, academic leaders, and staff

may not have fully appreciated their important role in contributing to the graduate student experience within the university, nor how graduate education contributes to the overall university strategic plan. In response to the update of the NAU Strategic Plan, the development of a university-wide Enrollment Strategic Plan, and the ABOR 2025 Enterprise Metrics, all of which include graduate enrollment and degree completion as a priority, considerable effort has been focused on educating colleagues about the importance of access to robust graduate programs as a means of offering opportunities to students and providing a trained professional workforce to serve the state, region, and nation. These efforts have included the following:

- Regular presentations during President's Cabinet and Provost's Academic Leadership Committee meetings from the Graduate Dean on various aspects of the graduate admissions process and opportunities to shift from faculty-centered to student-centered operations.
- Setting preliminary enrollment targets for specific graduate programs in consultation with the Provost, Graduate Dean, and the deans of all academic colleges.
- Enhanced communications regarding involvement of faculty in recruitment efforts for competitive programs.
- Preparation of promotional materials for specific programs, such as accelerated Bachelor/Master opportunities, specifically for programs utilizing 4+1 and 3+2 formats.
- Inclusion of colleagues from units outside of the academic division in strategic planning activities focused on graduate enrollment growth, such as Information Technology Services, the Office of Research, Marketing, Enrollment Management and Student Affairs, and more.

Admissions Improvements:

During the 2017-18 academic year, Graduate College leadership collaborated with staff and faculty across colleges as well as with institutional recruitment and admissions teams to evaluate the current graduate admissions process, identify opportunities to streamline policy and practice, and begin implementing changes. This work prioritized streamlining graduate applications, which included the following measures:

- Streamlining of the application form and process is ongoing, including the removal of any required information that can be gleaned from another source to improve the student experience during application.
- Acceptance of unofficial transcripts: Initial application review of graduate students is now done with unofficial transcripts and official documents are provided by the end of the students' first semester.
- GRE requirements: Many NAU programs removed the GRE as an admission requirement, and several others removed the requirement for students with GPAs over 3.0.
- Eliminating letters of recommendation: We have removed the requirement for letters of recommendation (LORs) for all master's programs, with a few justified exceptions. We are replacing LORs with a more straightforward evaluation form that still provides an opportunity for reviewers to make comments.

Implementation of these measures has resulted in a much reduced time to decision (24-48 hours compared with an average of two weeks just waiting for official transcripts). We expect that the removal of LORs will further support this new efficiency.

In spring 2018, collaboration on admissions processing between Enrollment Management and Student Affairs (EMSA) and the Graduate College accelerated, and the entire process was reviewed to identify opportunities for additional streamlining. This group determined that it is inefficient for the Graduate College to maintain separate vendor-hosted application and Client Relationship Management (CRM) tools. In accordance with our institutional goal of One NAU, the Graduate College is moving away from

CollegeNet as the graduate CRM to utilize Salesforce and PeopleSoft instead, which are already main NAU platforms. This shift will centralize prospect records and communications and will replace the CollegeNet application, customized for ~100 programs, with one developed in PeopleSoft or Salesforce. With respect to application development within Salesforce or PeopleSoft, our hard implementation deadline is January 2019.

The need for robust support in student recruitment and lead generation was pressing. These efforts had previously been driven by individual colleges and programs, not always in collaboration with the Graduate College or University Marketing. There was no coordinated effort around overall NAU graduate recruitment, which has now been restructured through the One NAU initiative to pull student recruitment into Enrollment Management and Student Affairs to foster a coordinated effort under which the individual colleges and departments will collaborate. The Graduate College will serve as a support unit for students in this model, not as the service delivery provider. Follow-up communications through the graduate student recruitment process will be built into our university-wide CRM system, not one unique to the Graduate College, and will create student journeys, similar to our undergraduate student messaging but tailored to the specific needs of the graduate student audience.

This more efficient system for enrolling graduate students meeting the requirements without the necessity of a unique, unit level review will apply to most of our graduate programs. We continue to work with programs to identify which competitive research-based graduate programs, primarily at the PhD level and some selective master's programs with enrollment caps, need unit level review. In these cases, however, review timelines are moved earlier in the annual cycle and programs are encouraged to engage in more timely communication with applicants, significantly shortening the time to admission decision.

As we have evaluated our graduate model, we have carefully expanded our portfolio of graduate programs, in sync with market demands, institutional mission, and the One NAU model, in order to provide optimal opportunities for the maximum number of qualified students.

Recently approved graduate programs, degrees, and certificates

NAU has actively developed, and re-organized, several graduate degrees in the last two years to increase the competitiveness of our portfolio and offerings with students and to respond to the workforce. These efforts often occurred in collaboration with the recruitment of key research faculty, or building of research teams to work in tandem with the expansion of graduate education in these fields at NAU. This is the model we will continue to utilize as we expand our graduate education opportunities in the future, maximizing faculty talent, evaluating student demand and determining workforce need.

Doctoral Degrees

PhD in Astronomy and Planetary Science (Fall 2016): Current faculty members in this program use ground-based and space-based telescopes to study small bodies in the Solar System and the formation and evolution of other planetary systems; spacecraft imagery to study planetary surfaces; and a state-of-the-art laboratory to study astrophysical ice analogs. Students in the program have superb access to large telescopes, and conduct cutting-edge research on planetary surfaces.

PhD in Combined School Counseling and School Psychology (re-organized Fall 2016): Accredited by the American Psychological Association, the program prepares students as well-rounded generalists with a strong foundation in both counseling psychology and school psychology. The combined approach promotes the optimal development of individuals, families, groups, and environmental systems, using empirically-supported and culturally-sensitive interventions.

PhD in Bioengineering (Fall 2017): The program educates future industry and research leaders in bioengineering through an integrative and interdisciplinary approach. Students receive advanced training in research through focused coursework and develop expertise in collecting, analyzing, interpreting, and presenting data at a level appropriate for positions in industrial research and development or academia. After completing the bioengineering degree, students are prepared to undertake a career in industry, government organizations, nonprofits, and/or universities.

PhD in Informatics (Fall 2017): The program develops skills for a meaningful and fulfilling career in research, as faculty, or as an entrepreneur in key application areas. It is a distinctive interdisciplinary program across Health and Bioinformatics, Ecological and Environmental Informatics, and Cyber and Software Systems. The program is strengthened by extensive research collaborations with regional organizations, including the Translational Genomics Research Institute, Northern Arizona Healthcare, and the U.S. Geological Survey.

PhD in Interdisciplinary Health (Fall 2018): Designed to educate and train the next generation of health researchers, advocates, and educators, this doctoral program opens unique opportunities in interdisciplinary research to advance understanding of health equity, disability, and psychosocial health.

Master Degrees

Master of Science in Computer Science (Fall 2017): With a focus on building sustainable systems and both thesis and non-thesis option, the MS in Computer Science prepares you for work in both practical and theoretical software development.

Master of Science in Informatics (Fall 2017): Building on the success of the PhD in Informatics and Computing, the master's program deepens students' expertise and abilities in the interdisciplinary, data-driven field of informatics.

Master of International Education Leadership (Fall 2018): Prepares students to serve as practitioners and researchers in the field of international education. Its launching is a response to the increase in international student enrollment nationwide over the past 10 years, and the need of professionals pursuing advanced degrees in careers that focus on global learning and international education.

Master of Organizational Leadership (re-organized Fall 2018): The Master of Organizational Leadership equips students to advance in executive leadership positions, addressing current issues. Provides for specializing in either Justice Studies or Project Management.

Master of Science in Parks and Recreation Management (Fall 2018): The Master of Science in Parks and Recreation Management prepares parks and recreation managers for leadership roles in public and commercial organizations.

Master of Science in Athletic Training (expanded in Fall 2018): The Master of Science in Athletic Training was expanded to the Phoenix Biomedical Campus in Fall 2018 to meet student demand in both Phoenix and Flagstaff locations. This degree helps prepare students for the BOC exam to become certified athletic trainers.

Master of Public Health (MPH; Fall 2018): An evidence-based, community-wide health solutions MPH program, providing for specializing in either health promotion or nutrition leading to dietetics certification.

Master of Social Work (MSW; Fall 2018): MSW program specializing in addressing poverty and

oppression in rural and indigenous populations in the Southwest.

Personalized Learning Degrees

Master of Computer Information Technology (MCIT; 2018): One of the first master's programs available in this format, the MCIT is tailored for busy professionals looking for a flexible and affordable degree to help advance technology-driven careers.

Master of Science in Nursing (2018): Irregular hours can make it difficult for healthcare professionals to commit to post-secondary education with classroom hours—whether online or in-person. We adapted our MS in Nursing to a competency-based education format so nurses can prepare themselves for advanced practice as fast as their schedule allows.

Graduate Certificates

Data Science Certificate (Fall 2018): This certificate in data science gives professionals in data-driven fields an extra edge with a richer skillset and up-to-date knowledge of best practices in data analytics.

Priority programs and strategic planning:

Understanding current programmatic offerings and outcomes while leveraging market analysis to validate existing options and identify options for new programs will allow us to establish a portfolio of offerings—in Flagstaff, statewide, and online—that meet the needs of non-traditional students, as well as support campus-based students in leveraging the online modality for earning credits toward degree completion. Establishing an institutional approach to program creation and maintenance to ensure we are meeting market demand is key. The creation of an institutional strategic enrollment plan has included specific identification of objectives and tactics required to support growth including focused marketing efforts across the academic year, reducing operational barriers to admission, and identifying opportunities to improve the student experience.

Development of new graduate programming is also carefully aligned with our research mission. NAU's graduate students contribute greatly to the research agenda, and NAU's priority research areas provide optimal opportunities for graduate education at the cutting edge.

Graduate education and NAU's research and creative scholarship mission:

NAU's achievements in education and research have resulted in recognition by Carnegie as a Tier 2 Doctoral University with Higher Research Activity. Maintaining and strengthening the basis for this recognition is a robust enterprise of research and scholarship that synergistically enhances education and also benefits from vital contributions from graduate and undergraduate student participation. One measure of NAU's research success is its climb within the National Science Foundation's ranking of institutions with greatest expenditures on research from 243rd out of about 1,000 in 2012 to 213th in 2016 and a strong likelihood of reaching the top 200 within the next few years. Reflecting this increasing success in research reputation, a growing number of NAU's STEM programs, as well as non-STEM areas such as social, behavioral, and health sciences, have strong graduate degree programs based on competence and research experience.

The university's foundational research strengths are in land management, environmental sciences, forest restoration, water quality and supply, and biological science. In these and allied areas, NAU's faculty, education and training programs, and research centers are nationally and internationally known. NAU has also grown important new research areas that connect and build outward from these strengths, in applied linguistics, cyber systems and informatics, health equity research, and astronomy and planetary sciences, and in emerging areas including bioengineering, mechanical engineering, and

material science. In all of these areas, graduate programs have been established or are being developed.

Faculty investments in support of research agenda:

Growth of research programs has been and will continue to be supported by NAU through investment of local and state funds, the latter through TRIF, in faculty hires, infrastructure, and operation and growth of research centers. In particular, a key element of growth has been the establishment of university research centers: the Pathogen and Microbiome Institute (PMI), the center for Ecosystem Science and Society (EcoSS), the Ecological Restoration Institute (ERI), the Center for Health Equity Research (CHER), the Merriam-Powell Center for Environmental Research (MPCER), the Land Conservation Initiative (LCI), and the Center for Bioengineering Innovation (CBI). Together, these seven major research centers and institutes contribute about 45% of NAU’s total annual research expenditure. In 2017, for example, the Center for Health Equity Research was awarded a \$21M grant from the National Institutes of Health involving investigators from three NAU colleges, multiple disciplines, and with multiple community partners.

The growth of the major research centers, as well as further development of NAU’s research and scholarship strength in departments and schools, has been driven by targeted “strategic” hires and regular hires along tenure track lines. Mid-career faculty members with high research activity bring funding and research foci with them when they come to NAU as well as help catalyze existing faculty members already at the university in that field or a collaborating field. Additionally, the allocation of new, regular hires along the tenure track of faculty members that are already research active or hold significant promise of establishing strong research programs continues to promote growth within the university of new and developing research. With the growing number, and with national reputations in research and scholarship, these faculty members both enable and drive expansion of graduate education at NAU. The hires have been strategic investments with limited university resources as well as by leveraging TRIF from 2014 to present are listed in the Table below. They complement an already existing core of nationally and internationally recognized leaders in research and creative scholarship.

| Faculty hire | Department, school, or research center | Related graduate programs; date of establishment | Prior Institution and Position |
|-------------------------|---|--|---|
| <u>2013-2014</u> | | | |
| Michelle Mack | CEFNS: Biological Sciences (traditional unit), Ecosystem (Center for Ecosystem Science and Society; established 2015) | Biology MS and PhD AND Informatics PhD and MS; 2017 | University of Florida, Professor |
| Edward Schuur | CEFNS: Biological Sciences, Ecosystem | Biology MS and PhD AND Informatics PhD and MS; 2017 | University of Florida, Associate Professor |
| O’neil Guthrie | CHHS: Communication Sciences & Disorders (traditional unit) | Interdisciplinary Health PhD; 2018 | Duke University, Postdoc |
| Viacheslav Fofanov | CEFNS: SICCS (School of Informatics, Computing, and Cyber Systems; established 2015) | Informatics PhD and MS; 2017 | Rice University/Eureka Genomics, PhD/Director of Bioinformatics |
| <u>2014-2015</u> | | | |
| Julie Baldwin | CHHS: CHER (Center for Health Equity Research; established 2016) | Interdisciplinary Health PhD; 2018 | University of South Florida, Faculty |

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|-------------------|--|---|---|
| Loren Buck | CEFNS: Biological Sciences, CBI (Center for Bioengineering Innovation; established 2014) | Bioengineering PhD; 2016 | University of Alaska Anchorage, Faculty |
| Kiona Ogle | CEFNS: SICCS | Informatics PhD and MS; 2017 | University of Wyoming, Assistant Professor |
| Jarrett Barber | CEFNS: SICCS | Informatics PhD and MS; 2017 | Arizona State University, Faculty |
| Temuulen Sankey | CEFNS: SICCS | Informatics PhD and MS; 2017 | Idaho State University, Assistant Professor |
| Kyle Winfree | CEFNS: SICCS | Informatics PhD and MS; 2017 | University of Delaware, Postdoc |
| Diana Stuart | SBS: Sustainable Communities (traditional unit) | Sustainable Communities MA AND Earth Science and Environ Sustain PhD; 2012 | Michigan State University, Assistant Professor |
| Brian Peterson | SBS: Geography, Planning, & Recreation (traditional unit) | Parks and Recreation Management MS; 2018 | Western Michigan University, Assistant Professor |
| 2015-2016 | | | |
| Frank von Hippel | CEFNS: Biological Sciences | Biology MS and PhD AND Informatics PhD and MS; 2017 | University of Alaska Anchorage, Professor |
| Scott Goetz | CEFNS: SICCS | Informatics PhD and MS; 2017 | Woods Hole Research Center/University of Maryland, Deputy Director, Senior Scientist, PhD |
| Chris Doughty | CEFNS: SICCS | Informatics PhD and MS; 2017 | Oxford University, Research Lecturer |
| Frederic Louergue | CEFNS: SICCS | Informatics PhD and MS; 2017 | University of Orleans, Full Professor |
| Benjamin Ruddell | CEFNS: SICCS | Informatics PhD and MS; 2017 | Arizona State University, Associate Professor |
| Marco Gerosa | CEFNS: SICCS | Informatics PhD and MS; 2017 | University of California Irvine, Visiting Professor from Sao Paulo |
| Alex Groce | CEFNS: SICCS | Informatics PhD and MS; 2017 | Oregon State University, Associate Professor |
| Bertrand Cambou | CEFNS: SICCS | Informatics PhD and MS; 2017 | Crocus Technology/University of Paris, Executive Chairman/ PhD |
| J.J. Duke | CEFNS: Biological Sciences | Biology MS and PhD AND Bioengineering PhD; 2016 | Ohio University, Assistant Professor |
| Emily Cope | CEFNS: Biological Sciences, PMI (Pathogen and Microbiome Institute; established 2016) | Biology MS and PhD AND Informatics PhD; 2017 | University of California, San Francisco/Postdoc Scholar |
| Chris Edwards | CEFNS: Physics and Astronomy | Astronomy & Planetary Sciences PhD; 2016 | California Institute of Technology/Postdoc Fellow |
| Chad Trujillo | CEFNS: Physics and Astronomy | Astronomy & Planetary Sciences PhD; 2016 | Gemini Observatory/ California Institute of Technology, Head of Adaptive Optics/Postdoc Scholar |
| Archana Varadaraj | CEFNS: Chemistry and Biochemistry | MS and PhD programs | University of South Carolina, Postdoc Fellow |
| Naren Rajasekaran | CEFNS: Chemistry and Biochemistry | MS and PhD programs | Stanford University, Postdoc |

| | | | |
|-------------------------|---|--|---|
| Rob Kellar | CEFNS: Biological Sciences; CBI | Biology MS and PhD AND Bioengineering PhD ; 2016 | Histogen, VP of Research and Development |
| Tim Becker | CEFNS: Mechanical Engineering; CBI | Bioengineering PhD; 2016 | Anevas Technologies, Inc, Chief Technical Officer |
| Zachary Lerner | CEFNS: Mechanical Engineering; CBI | Bioengineering PhD; 2016 | National Institutes of Health/ Colorado State University, Postdoc Fellow/PhD |
| Brett Dickson | CEFNS: SES (School of the Earth and Sustainability) | Earth Science and Environmental Sustainability PhD; 2012 | Society for Conservation Biology/Colorado State University, David H. Smith Conservation Research Fellow/PhD |
| Nadine LaPorte | CEFNS: Forestry | Forestry PhD AND Informatics PhD; 2017 | American Museum of Natural History/Clinton Foundation Climate Initiative, Senior Consultant/Senior Advisor |
| <u>2016-2017</u> | | | |
| Gabe Montano | CEFNS: Chemistry and Biochemistry | MS and PhD programs; planned Materials Science PhD (2019) | |
| Nicolette Teufel Shone | CHHS: Health Sciences, CHER | Interdisciplinary Health PhD; 2018 | |
| Jeff Foster | CEFNS: Biological Sciences, PMI | Biology MS and PhD AND Informatics PhD and MS; 2017 | |
| Andrew Richardson | CEFNS: SICCS, Ecos | Biology MS and PhD AND Informatics PhD and MS; 2017 | |
| Yiqi Luo | CEFNS: Biological Sciences, Ecos | Biology MS and PhD AND Informatics PhD and MS; 2017 | |
| Matt Salanga | CEFNS: Biological Sciences | Biology MS and PhD AND Informatics PhD and MS; 2017 | |
| Ines Montano | CEFNS: Physics and Astronomy | Astronomy & Planetary Sciences PhD; 2016; planned Materials Science PhD (2019) | |
| Ryan Behunin | CEFNS: Physics and Astronomy | Astronomy & Planetary Sciences PhD; 2016 | |
| Mark Loeffler | CEFNS: Physics and Astronomy | Astronomy & Planetary Sciences PhD; 2016 | |
| Christina Thomas | CEFNS: Physics and Astronomy | Astronomy & Planetary Sciences PhD; 2016 | |
| Tyler Robinson | CEFNS: Physics and Astronomy | Astronomy & Planetary Sciences PhD; 2016 | |
| Samantha Sabo | CHHS: Health Sciences, CHER | Interdisciplinary Health PhD; 2018 | |
| Jason Sahl | CEFNS: Biological Sciences, PMI | Biology MS and PhD AND Informatics PhD and MS; 2017 | |
| Bridget Barker | CEFNS: Biological Sciences, PMI | Biology MS and PhD AND Informatics PhD and MS; 2017 | |
| Jason Ladner | CEFNS: Biological Sciences, PMI | Biology MS and PhD AND Informatics PhD and MS; 2017 | |
| Joseph Mihaljevic | CEFNS: SICCS | Informatics PhD and MS; 2017 | |
| Morgan Vigil | CEFNS: SICCS | Informatics PhD and MS; 2017 | |

| | | | |
|-------------------|--|--|--|
| Hayes | | | |
| Brian Gowanlock | CEFNS: SICCS | Informatics PhD and MS; 2017 | |
| Truong Nghiem | CEFNS: SICCS | Informatics PhD and MS; 2017 | |
| Rachel Mitchel | CEFNS: SES | Earth Science and Environmental Sustainability PhD; 2012 | |
| Rebecca Best | CEFNS: SES | Earth Science and Environmental Sustainability PhD; 2012 | |
| Mariah Carbone | CEFNS: Biological Sciences, Ecosystems | Biology MS and PhD AND Informatics PhD and MS; 2017 | |
| 2017-2018 | | | |
| Jennifer Martinez | CEFNS: Chemistry and Biochemistry | MS and PhD programs; planned Materials Science PhD (2019) | Center for Integrated Nanotechnologies, Technical Staff Member |
| Han Sup Han | CEFNS: Forestry | Forestry PhD | Humboldt State University, Researcher |
| Kevin Gurney | CEFNS: SICCS | Informatics PhD and MS; 2017 | Purdue University, Associate Professor |
| Naomi Lee | CEFNS: Biological Sciences | Biology MS and PhD AND Interdisciplinary Health PhD; 2018 | |
| Laura Wasylenki | CEFNS: Chemistry and Biochemistry | MS and PhD programs | |
| Helen Rowe | CEFNS: SES | Earth Science and Environmental Sustainability PhD; 2012 | Purdue University, Faculty |

Priority research areas for NAU:

With recent ABOR approval to create an independent College of Engineering, Informatics, and Applied Sciences (CEIAS), NAU anticipates significantly expanding and developing new opportunities in academic programs aimed at preparing students for high-demand jobs and in research in high-impact technology, engineering, and applied science. In particular, creation of CEIAS will recognize at the very beginning the tremendous synergy of faculty with highly successful research activities and success attracting students and providing highly effective undergraduate and graduate education. Keystone graduate degree programs have been developed taking advantage of this synergy of research and education success in informatics and bioengineering and plans are being developed for graduate programs in high-demand, high-impact areas including materials science and mechanical engineering. These will complement existing graduate programs in civil, construction, and environmental engineering, where further opportunities to benefit from increased research focus can also be pursued. As the new college concludes its initial organizational stage other areas in which graduate programs could be created around the core strengths will be considered that will provide more opportunities to attract students, spur research, scholarship, and educational excellence, and help fulfill Arizona’s needs for applied science, engineering, and technology workforce development.

The intimate and mutually supportive connection between research and education is also growing strongly at NAU within colleges outside of the STEM areas, within the College of Health and Human Services (CHHS), the College of Social and Behavioral Sciences (SBS), and the College of Arts and Letters (CAL). For example, CHHS houses a strong and growing program in health equity research and tremendously successful programs in allied health, SBS houses nationally recognized research and graduate education in anthropology, social work, and criminal justice, and CAL is home to a nationally recognized program in applied linguistics with a PhD program and creative writing with an MFA degree. In addition, plans to grow success and scope in graduate education at NAU involve strengthening and

growing programs in the College of the Environment, Forestry, and Natural Sciences and the new CEIAS that spins out from it, where we have core strengths in STEM research, but also in other colleges with considerable research and creative scholarship more broadly. This growth will be targeted to align with areas of academic excellence or strategic research investment.

High impact faculty hires in the areas of Biological Sciences, Mechanical Engineering, Informatics, Communication Science and Disorders, Chemistry, Physics and Astronomy, and others, are providing outstanding mentorship for an increasing number of graduate students in these fields, thus supporting program growth, as well as research achievement.

We have much work to do to realize our Enterprise goals for 2025. This plan has outlined areas of success, areas of concern, work that has been completed over the last two years, and a work plan for the future year, including full transition of the Graduate College to Salesforce, the university's CRM. NAU has much to be proud of related to its expanding research portfolio and the future of graduate education. The organizational structure of graduate education required rethinking the role and responsibilities of the Graduate College within the organization to move from a liaison among peers to a leadership role identifying trends and working with colleagues to improve overall institutional processes on behalf of the student experience.

Over the last year we have examined and modified the organizational structure for NAU graduate education, developed new graduate programs in high impact areas, streamlined processes to facilitate the student experience, invested in administrative infrastructure to support enrollment growth, and utilized external consultants with expertise in enrollment management. Reorganization of online and statewide community campus areas under a One NAU philosophy has established centralized business practices which have provided a model for graduate education support. The premise of the One NAU model is to maximize student services by coordinating them in central locations no matter the population served, such as recruitment and admissions through Enrollment Management, Marketing through a centralized University Marketing Department and advising through the Provost's Office serving all academic units.

Finally, building graduate education into the overall Strategic Enrollment Plan with clearly identified goals for each delivery modality insures that everyone at NAU takes responsibility for the student experience and continues to support our implementation of key initiatives such as Salesforce among all divisions, including the academic units. All academic units have a responsibility for contributing to the ABOR metrics and that contribution is defined through an organized university-wide strategic plan. While I am concerned about individual milestone years in the immediate future, I am confident that the combination of efforts on multiple fronts will position the institution to meet or exceed ABOR goals for graduate enrollment and degree conferrals by 2025.