



2019 - 2023 Planning Report

Institutional Academic, Research,
and Student Service Plans

November 2018*



*As revised - see page 48.

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INTRODUCTION

The Nevada State Legislature mandates that public higher education institutions compile a comprehensive report on program plans. Therefore, this report is prepared in accordance with state law requiring the Nevada System of Higher Education (NSHE) to prepare a biennial report for submission to the Nevada State Legislature that outlines plans for new programs and expansions of existing programs of instruction, public service and research. Specifically, *Nevada Revised Statutes* 396.505 provides the following:

1. The Board of Regents shall prepare a comprehensive plan for the next 4 years which explains:
 - (a) Any anticipated new programs and expansions of existing programs of instruction, public service or research, itemized by year and by purpose;
 - (b) The anticipated cost of each new or expanded program described under paragraph (a);
 - (c) The amount and source of any money anticipated to be available, from sources other than legislative appropriation, to meet each item of anticipated cost listed pursuant to paragraph (b); and
 - (d) Any further information concerning its comprehensive planning which the Board of Regents may deem appropriate.
2. The Board of Regents shall biennially bring the plan up to date for the ensuing 4 years, and shall present the revised plan to the Legislature not later than February 1 of each odd-numbered year.

This report summarizes the institutions' academic and research plans, also in accordance with Board policy (Title 4, Chapter 14, Section 3.3 of the *Handbook*). These plans must be viewed in the context of an institution's overall budget and fiscal capacity, as well as demand for the program. In some cases, the plans may include academic programs that are being discussed or considered for the future, but they may not ultimately be brought forward for approval for a variety of reasons. However, they are included in the report as an indication of what may come forward within the next four years. Many of the anticipated programs are projected to be funded with federal grants, making some programs more likely than others to begin in times of limited state resources. To that end, these lists may be viewed as "wish lists" based on resource availability.

Because this report is updated and published every two years, it is often the case that institutions may have programs on the list from several years back and continue to roll them forward in the hope that eventually resources will be available to develop such programs. The plans are intended to notify various constituencies, including the Board of Regents and the Legislature, of what institutions are hoping to develop and believe is needed for them to meet their mission and the needs of the state, but they should not be construed as definitive in terms of the date of implementation.

The current NSHE Strategic Plan can be accessed [here](#).



UNIVERSITY OF NEVADA, LAS VEGAS

Strategic Objectives/Mission Statement

UNLV's diverse faculty, students, staff, and alumni promote community well-being and individual achievement through education, research, scholarship, creative activities, and clinical services. We stimulate economic development and diversification, foster a climate of innovation, promote health, and enrich the cultural vitality of the communities that we serve.

The institution is guided toward mission fulfillment by four Core Themes: student achievement; research, scholarship, and creative activity; the academic health center; and community partnerships. The institution also recognizes diversity & inclusion and infrastructure & shared governance and as twin supports that are necessary for the achievement of its goals.

Student Achievement

UNLV recruits, retains, and graduates a diverse body of students through innovative learning experiences, access to mentoring and research opportunities, and the vibrant campus community.

Office of Undergraduate Education

The Office of the Vice Provost for Undergraduate Education oversees the Retention, Progression, and Completion (RPC) efforts of the institution. RPC at UNLV is a critical piece of the student success equation, and the programs and initiatives described below are important efforts that continue to support the RPC and student achievement goals of UNLV.

- Campus Connect is a student success platform that includes a wide range of functionality targeted at providing academic advisors, faculty, college leadership, and other campus partners with the ability to effectively communicate, monitor, and interact with students in order to promote their retention, progression, and completion. In addition to its enhanced workflow, early alert reporting system, and case management capabilities the Campus Connect platform also provides UNLV with predictive analytics based on historical institutional data that can furnish insight into identifying and intervening with at-risk and off-path students. Academic advising centers use Campus Connect to create RPC campaigns, communicate with students, complete campus resource referrals, and utilize tracking tools in order to better engage and assist students on their educational journey.

- 15 to Finish Campaign. UNLV continues to encourage all students to enroll into 15 credits per semester or 30 credits per academic year. Academic advisors utilize RPC administrative enrollment at new student orientation to create “15 to Finish” schedules for incoming first-year students.
- Gateway Course Success (Math and English completion). UNLV continues to implement strategies to ensure that students complete gateway Math and English courses within their first year, per Board of Regents policy. In addition to using advising-led RPC administrative enrollment in gateway courses for the first semester, we have revised our approach to preparatory Math and English with a focus on eliminating or reducing time in non-credit bearing preparatory courses. The Math Learning Center revised Math 95 and Math 96 courses to allow students to complete the preparatory Math in one semester and progress to gateway Math in the second semester. Additionally, the pathway to gateway Math will only require one preparatory Math course for students who do not place directly into the gateway Math course required for their major. The Department of English utilizes ENG 101E and 101F, which comprise a two-semester, extended composition sequence that satisfies UNLV’s ENG 101 requirement and better prepares students to be successful in ENG 102.
- The Major Pathways Program is a collaborative effort between the Academic Success Center and the Colleges of Engineering, Business, and Sciences providing tailored academic support and advising services for students who applied for, but did not meet, the college-level admissions requirements for these colleges. This program works to retain and prepare students who might otherwise opt to drop out.
- The UNLV/CSN Transfer Office provides dedicated academic advising for students transferring from CSN to UNLV. Each year, the number of students served by the transfer office continues to grow, the students who met with a transfer advisor successfully transferred more credits than those who did not utilize this service, and the credits transferred were degree-applicable. The transfer office has added a number of workshops to its annual schedule and continues to build partnerships between UNLV and CSN, which has positively impacted the success of incoming CSN transfer students.
- The UNLV/CSN Freshman Academy is a program designed to impact the overall academic success of new students as they transition from high school to university-level learning. Academy students take a combination of courses taught by UNLV faculty as well as faculty from the College of Southern Nevada (CSN) on the UNLV campus. Academy students work very closely with a dedicated UNLV Academic Advisor to be sure appropriate courses are completed within the first year of studies and they are connected to specialized resources through the Academic Success Center to support their academic success.
- Student Outreach Specialists (SOS) were hired to support and complement UNLV's ongoing Top-Tier and RPC initiatives. These specialists were hired to complete outreach to special populations, including students who were tagged with three or more pre-college risk factors. SOS outreach proactively provides students with knowledge about campus resources in order to promote the active and ongoing use of these targeted and individualized recommendations.

Office of Academic Assessment

The Office of Academic Assessment supports campus efforts toward assessing student learning outcome attainment through professional development, survey distribution and analysis, and campus-wide data collection. To support the Core Theme of Student Achievement, the Office of Academic Assessment tracks student perceptions of their attainment of the University Undergraduate Learning Outcomes (UULO) through the Learning Outcomes Survey, administered in the First Year Seminar; and the Graduating Senior Exit Survey, administered when students apply for graduation. Additionally, Milestone GPA and enrollment are tracked to indicate satisfactory attainment of the UULOs and progression through the general education curriculum.

Graduate College

The Graduate College is committed to advancing our Top Tier goals, particularly through our strategic Recruitment, Retention, Progression, Completion (R2PC) efforts—both centralized and at the program level—to support student success, and our Top Tier Graduate Research, Scholarship, and Creative Activity working groups. More specifically, the Graduate College has added a number of new programs to support student success from recruitment through admissions, funding, student progression, and degree completion including:

- Integration of a new Grad Rebel Lifecycle model to integrate career/professional development opportunities, mandatory forms and milestones, and electronic messaging (email, student portal, and eventually text messages) and provide “when you need it” information, messaging, and invitations to participate in our free Professional Development Academy workshops, programs, and events. The lifecycle reflects students’ status and level, i.e. early-, mid-, or late-career master’s or doctoral students. Our interactions with graduate students will be tailored to their status/level.
- Design and implementation of a Lifecycle Customer Relations Management system, the “Grad Rebel Gateway,” to support, track, engage, and progress graduate students from recruitment to admissions to funding to early-, mid-, and late-career progression, and then into first alumni placement. This graduate student system of engagement has a personalized portal for individualized student experiences and efficient back-end processing, data, and dashboards for faculty/staff.
- The Graduate College engages in strategic recruitment to support faculty and department efforts, as well as multi-level engagement to retain, progress, and graduate our students. We strive to increase enrollment by at least 1% per year; expand the number of Graduate Assistants (GAs) available and strive for better and more competitive GA packages; and aspire to graduate more than 200 doctoral students each year.

Research, Scholarship, and Creative Activity

UNLV fosters a climate of innovation in which faculty and students produce high-quality, widely disseminated, and influential research, scholarship, and creative activities.

Office of Research & Economic Development

As the only research university in Southern Nevada, UNLV is dedicated to developing and supporting our faculty, students, and staff as we strive to become a Top Tier university. UNLV is simultaneously dedicated to developing and supporting the human capital, regional infrastructure, and economic diversification that Nevada needs for a sustainable future. UNLV is committed to producing the highly qualified workforce our community needs; bringing more federal and private grant funding to Southern Nevada; partnering with industry to create new businesses through the commercialization of intellectual property at UNLV; and improving the lives of all Nevadans through research, scholarship, and creative activity.

As a Top Tier research university, a major goal of UNLV is to achieve “highest research activity” (R1) status, per the Carnegie Classification of Institutions of Higher Education, by 2025. Towards this effort, there are several accomplishments that need to be achieved:

- research expenditures: \$150 million per year by 2025
- research intensive faculty: 120 new research intensive faculty hired by 2025
- patent applications: 75 patent applications filed per year during fiscal year 2025 and beyond
- doctoral graduates: 200 doctoral graduates per year by academic year 2024-2025

In an effort to achieve this goal through enhancing our research activities and academic standing, several actions have been taken over the past few years:

- Development of the Nevada Institute for Personalized Medicine (NIPM) and the International Gaming Institute (IGI) as interdisciplinary research institutes reporting to the Vice President for Research and Economic Development. Both institutes were launched using Knowledge Funds from the Governor's Office of Economic Development. These institutes bring together the best and the brightest to conduct interdisciplinary research that benefits the State of Nevada and bring major research funding to UNLV.
- Obtaining legislative funding for Health for Nevada and devoting the initial funding to health disparities research, including hiring research intensive faculty to conduct interdisciplinary research to improve the health of Nevadans. Future funds will be used to continue support for health disparities research, as well as developing new interdisciplinary programs in neurosciences (with a focus on neurodegenerative diseases) and sports research and innovation.
- Strengthening the research infrastructure through reorganization of our Office of Sponsored Programs (OSP), requiring certification in research administration for the majority of OSP staff, developing an assignment plan for interdisciplinary research space, and increasing support staff and structures to support Workday.
- In collaboration with Gardner Company, Inc. and the UNLV Research Foundation, the first building is under construction at the UNLV Harry Reid Research and Technology Park, with UNLV renting 1.5 floors for research and innovation activities.
- Top Tier committees devoted to Research, Scholarship, and Creative Activities have been restructured to develop new policies, procedures and recommendations regarding research infrastructure and support.
- A research excellence program will be launched this winter (2018-2019) to provide resources and support for faculty, students, and staff in grant writing, publications, statistical support services, data management, and compliance activities, among others.
- Research Week, launched in 2016, has grown into a campus-wide, showcase event that attracts not only our own faculty, staff, and students, but also high school students and community members. Research Week promotes and highlights creative works at UNLV with participation from all colleges and schools.
- Our Office for Undergraduate Research has grown markedly, providing resources, funding, and opportunities for undergraduate students to work with faculty on their research and present their work to the UNLV community.
- UNLV is bringing research into the public square through membership in The Conversation US which publishes online faculty-written research articles on a daily basis.

The following action plans also have been developed for the coming years:

- Identify opportunities for additional university-level centers and institutes.
- Further develop the UNLV Harry Reid Research and Technology Park for synergistic activities with industry.
- Establish an incentive program for faculty excellence in research, scholarship and creative activity.
- Evaluate how tenure and promotion standards reward and recognize excellence in research.

- Develop additional Interdisciplinary Ph.D. Program(s), including programs in Neurosciences and Sports Research.
- Reevaluate the GA Program and realign to support Top Tier efforts.
- Establish benchmarks and policies for post-doc and research faculty.
- Policies, processes, and mentorship: review, create, and implement.
- Further engage commercial partners in sponsoring research, licensing technologies, building businesses, and offering real world experiences for students to work on cutting edge technology.
- Continue to expand statewide collaborations with the University of Nevada, Reno and the Desert Research Institute. Current efforts are focused on the Clinical and Translational Research Infrastructure Network (CTR-IN) and the National Science Foundation EPSCoR initiatives.
- Expand research collaborations and faculty exchanges with countries identified in Governor Sandoval's Trade Missions. Current planning activities are taking place with Ukraine, Ghana, South Africa, and Poland.

Graduate College

The Graduate College's intense engagement in Graduate Research, Scholarship, and Creative Activity includes:

- We established an Office of Postdoctoral Affairs in 2017 to address an unmet campus need. Our Postdoctoral Affairs Faculty Board and Top Tier Working Group track our postdocs, are drafting a Postdoc handbook, provide support services to postdocs and their mentors, and are working to grow and strengthen our campus postdoc community.
- The Innovative Graduate Programs Top Tier Working Group established a new model for structuring and managing interdisciplinary graduate programs. They are considering the merits of graduate certificates as minors, graduate badges, and stackable graduate certificates.
- The Top Tier R2PC Working Group is focused on supporting a wide array of data collection, modeling, tracking, training, and programming to support graduate enrollment management.
- The Top Tier Graduate Faculty and Student Support Working Group tackles policy, process, and programs to raise standards (i.e. new Graduate Faculty Status, Graduate Advisory Committee, and Graduate Teaching requirements). They advise and consult on strategic ways to deploy existing GA and student funding resources, as well as advocate for new resources. And this group develops resources to support excellence in graduate faculty mentorship and student success.
- The new Top Tier Graduate Research Excellence Working Group is focused on establishing infrastructure to encourage and ensure excellence in graduate student research, scholarship, and creative activity; promoting training on ethics and best practices; and providing extensive grant-writing training opportunities to graduate students.

Office of Faculty Affairs

The Office of the Vice Provost for Faculty Affairs is committed to facilitating faculty success in research as well as in other areas of faculty life. Faculty Affairs will continue its work providing administrative support to the annual evaluation process, promotion and tenure, conflict of interest reporting, and the development of college and department bylaws. An exciting new Faculty Affairs initiative is the Faculty Development Commons, a meeting and physical space to engage in faculty development, career planning, research support, and teaching support. The Commons is a hub for UNLV's faculty community, providing a welcoming lounge space, a quiet work area, small meeting rooms, practice teaching space, individual and small-group consultations, and other faculty development resources

and information. The program is grounded in faculty input on desired support to promote faculty success, and lessons from research-based practices for faculty development programs across the nation. Many campus units, academic and administrative, along with a team of Faculty Development Fellows, work in collaboration to provide this support for all members of the UNLV faculty community.

Academic Health Center

The Academic Health Center fosters a dynamic, humanistic environment that:

- promotes an innovative curriculum that prepares a collaborative, practice-ready workforce
- advances a synergistic pathway toward excellence in research and scholarship
- encourages collaborative, comprehensive, person-centered clinical services
- stimulates reciprocal community engagement that enhances the visibility and demonstrates the values of the Academic Health Center.

Over the next two years, at UNLV School of Medicine, we will accept our third and fourth incoming classes, and will achieve our initial complete complement of 240 students. This will position us well for the planned future expansion of enrollment soon thereafter. Also, in the coming two years, we hope to finalize the plans to begin construction on our Medical Education Building. Moreover, planning for the future Clinical Education Building as well as the Research Education Building will commence. The School of Medicine, offers two degree programs at this point in time. One is the Medical Doctor degree awarded to our medical students, with the first class graduating in June of 2021. There is also a master's level degree given to students in the Couple and Family Therapy Program. This program transitioned over to the School of Medicine in the last academic year.

As the school moves forward, by the summer of 2021 we hope to have obtained full accreditation with the Liaison Committee on Medical Education, the accrediting body for schools of medicine in the United States. We will be introducing our innovational longitudinal care curriculum in the third year. While this curriculum style has been undertaken in cohorts at various medical schools across the country, this may well be the largest implementation of a longitudinal curriculum ever seen in the United States. Conceptually, this allows students to have more outpatient experience as opposed to being primarily hospital-based, and will also allow our clinical medical students to follow patients over their third and fourth years of medical school. Combined with some of the innovative curriculum that has been introduced in the first two years, this will position UNLV School of Medicine as a national leader in medical education.

Over the next two years, we expect an expansion of clinical services, which will provide medical students, as well as students from other schools, with improved opportunities for education. We also see the expansion of research in the School of Medicine and with our partners throughout UNLV. Lastly, over the next two years we expect the strengthening of the partnership that will eventually form the Academic Health Center. This partnership will involve the School of Medicine, the School of Dentistry, the School of Nursing, the School of Allied Health and the School of Community Health, which we hope will soon be an accredited School of Public Health. Furthermore, we expect that over the coming years, the majority of the education for these schools will be in the Las Vegas Medical District and that the Academic Health Center will be able to work synergistically to provide improved educational experiences for students from all five schools. Moreover, working collaboratively, the schools will also be able to serve the community in areas of direct patient care as well as via research and community service projects.

Community Partnerships

UNLV stimulates economic development and diversification, fosters a climate of innovation, and enriches the cultural vitality of the communities we serve.

Office of Community Engagement

The establishment of an Office of Community Engagement in 2016 was one of the first steps toward accomplishing our goals, and we have set objectives focused on:

- creating community connections
- cultivating a climate of innovation
- engaging with the community
- increasing start-up activities and discoveries

As we strive to reach these objectives, we focus our actions on

- gaining community support for student opportunities
- engaging with the community to support economic development
- inviting the community to advance development and fundraising
- engage with partners to help build intellectual and cultural vitality in the community
- building relationships through, and inviting the support of, athletics
- encouraging and facilitating greater community engagement
- helping solve community problems
- being creative in communicating the UNLV brand

In order to increase the breadth and depth of the economic and cultural impact of the university's activities on the community, we carefully track indicators of our success to measure our progress, which include:

- number of community partners and projects, service-learning courses and hours, and campus community visitors
- disclosures submitted, startups (techs and new businesses), Small Business Development Center jobs created, and clients served
- community engagement, and partners' perception of success/performance
- constituent involvement with fundraising and with the Alumni Association
- start-up activities and discoveries
- success in UNLV's athletic programs

Division of Educational Outreach

As the premiere provider of noncredit courses and programming in Southern Nevada, the UNLV Division of Educational Outreach (DEO) is dedicated to developing and supporting our community, faculty, students, and staff as we strive to become a Top Tier university. DEO staff have spent the last six months working on strategic planning for each specific program within DEO as well as an overall strategic plan for the entire organization. These have included program-specific strategic plans for: Summer Term, Continuing Education, Community2Campus, the Osher Life Long Learning Institute at UNLV, the Cannon Survey Center, as well as internal operations and internal marketing support.

DEO has identified the following strategic initiatives as top-level courses of action over the next three fiscal years from FY2019 to FY2021:

- enhance the Educational Outreach student experience
- build internal talent capacity
- increase student access
- strengthen marketing outreach
- expand offerings and programming
- achieve financial sustainability
- improve the physical infrastructure
- drive decisions with data
- strengthen internal relationships

Diversity & Inclusion

Office of Diversity Initiatives

The Office of Diversity Initiatives envisions UNLV as a university that recognizes that the pursuit of excellence is intertwined with a commitment to diversity in all aspects of university life. Through the cultivation of diversity, the Office of Diversity Initiatives will lead efforts to institutionalize diversity as a fundamental transformative force that fosters excellence, academic, professional and personal growth. We will assist UNLV in realizing its full potential by empowering our community with a shared vision, understanding and acceptance of responsibility for diversity and inclusion.

The mission of the Office of Diversity Initiatives is to promote an academically enriching and supportive culture that allows all members of our community to thrive and succeed. We will achieve our mission by collaborating with on- and off-campus stakeholders and change agents; intentionally designing a comprehensive, university-wide approach to diversity; facilitating policy creation; and empowering students, faculty, and staff to build a diverse and inclusive campus community.

We are committed to:

- institutionalizing diversity in all aspects of university life
- fostering an inclusive environment and advocating for equity
- creating a climate that respects individual differences
- seeking success through collaboration
- providing opportunities for community engagement
- achieving integrity in our work through engaging in transparent processes and actions
- demonstrating accountability through assessment

Infrastructure & Shared Governance

As part of our overall strategic plan, the university recognizes the importance of Infrastructure and Shared Governance in all aspects, and this foundational goal area is measured and monitored. An improved infrastructure and a healthy shared governance model are both pivotal in order to accomplish all of our core themes. The university seeks to continually develop and leverage the conditions necessary for success, which will include an effective organizational structure, improved infrastructure, a service-oriented culture, meaningful faculty engagement in shared governance, and the capacity for informed decision-making and informed risk-taking. Simply stated, the university seeks to enhance essential components of our infrastructure by focusing on:

- shared governance

- infrastructure
- business processes
- customer service and relations
- wayfinding and safety

The following action items have been established for this area:

- strengthening shared governance on campus
- expanding the depth and diversity of faculty participants in this process
- reviewing UNLV's organizational structure
- maintaining and expanding our technology infrastructure
- raising the efficiency and effectiveness of UNLV's business infrastructure
- improving efficiencies regarding hiring processes, document imaging and management, extra contractual compensation, financial account numbers, and service-level agreements
- promoting a new customer service model: The REBELS Way
- improving communication and collaboration across campus
- enhancing the onboarding of new UNLV employees
- continuing advocacy through monitoring employee benefits
- improving diversity and inclusion efforts across the campus

In order to enhance essential components of our infrastructure, we monitor progress through measuring:

- faculty satisfaction
- webpage views
- business process improvement
- concierge requests
- staff turnover
- safety trainings

In addition, we continually collect updates, metrics, and anecdotal information regarding:

- annual satisfaction surveys demonstrating progress
- data governance
- faculty participating in shared governance
- key human resource functions and processes
- business process goals
- plans and actions to enhance diversity, equity, and inclusion
- the technology master plan
- emergency management
- customer service, onboarding, and communication
- employee benefits

Division of Student Affairs

To enhance student safety and police services for all UNLV locations, UNLV Police Services intends to transition to the Southern Nevada Area Communications Council radio system, a public safety communications system that currently supports several regional fire and police agencies throughout southern Nevada. In addition to new communications equipment and personnel

training, the transition will provide interoperable mission critical voice communications with surrounding police, fire, and medical agencies, resulting in greater effectiveness in serving students, faculty, staff, and campus guests who are experiencing emergencies.

With the opening of medical education facilities at UNLV's satellite location on Shadow Lane, the number of students taking classes at that location has and will continue to grow. These students pay the student health fee, but they might not regularly visit main campus to access the healthcare facilities in the Student Recreation & Wellness Center. For this reason, Student Wellness (integrated mental health and health services) plans to provide healthcare services at the Shadow Lane location.

Feedback from students and tenants of the Student Union as well as use of the building indicate that it is reaching capacity, and with enrollment projected to continue to grow, students favor expanding it and support paying higher fees to pay for it. While the project will be largely supported by a student fee increase, additional funding will be provided by private gift support, auxiliary revenues (e.g., bookstore, dining, income from event bookings), and existing reserve funds (previously set aside). The plan is for an approximately 150,000 square foot addition to the existing structure, which would double the size of the facility.

Over the next four years, the Center for Academic Enrichment and Outreach (CAEO) will apply in 20 federal grant competitions in order to sustain and expand student services for first-generation, low-income students. Grants awarded in two competitions would be new to UNLV. These 20 federal grants support services including tutoring, advising, counseling, mentoring, and financial literacy which seek to improve college access and close the achievement gap for participating students.

Long a dream of our federally-funded CAEO, the Student Success Center facility will be a collaboration with the Academic Success Center (ASC), Writing Center (WC), and other academic support services. This proposed 100,000 square foot facility would house administrative space for personnel from CAEO, ASC, WC, and others. It would also provide space for direct services to students as well as multi-purpose space for instruction and undergraduate research.

To meet the demand for on-campus or campus-adjacent housing, UNLV entered into a public-private partnership to construct additional student housing on the north edge of campus, in what is becoming known as the U-District. The initial phase, The Legacy, welcomed student tenants in Fall 2016. The second phase, The Degree, is expected to open in Fall 2019 with an additional 760 beds for UNLV students. While UNLV will incur some additional expenses related to policing, these expenses will be offset by revenues from the property.

Office of Information Technology

UNLV continues to utilize the Information Technology (IT) governance structures instituted in 2017 for annual refinement of both short-term and long-term planning initiatives in support of the university Core Themes. The IT governance groups oversee initiatives that provide a solid foundation for ongoing academic enhancements and initiatives that provide direct support for specific university goals.

Foundational Initiatives:

- Revise and implement a rolling three-year campus IT infrastructure plan to support the continued growth in academic, research, and security-related (cameras, panic buttons, VoIP phones, etc.) network and server requirements. Plans include remediating deep structural deficits (intra-building network fiber, secure physical spaces for equipment, and adequate cooling and adequate power with required electrical grounding for those spaces) that constrain network growth. Plans also include expansion of campus-wide wireless coverage,

security technologies, enhanced telecommunication services, and support for the Internet of Things, as underlying structures are developed to allow the required growth.

- Establish the role of a Chief Information Security Officer to develop the security posture required for a high-profile research institution, and coordinate the multiple initiatives planned to strengthen the university's cyber defenses.
- Implement enterprise-wide document imaging and electronic workflow solutions that enable members of the university to accomplish their work easily, efficiently, and securely.

Top Tier Initiatives

- Student Achievement:
 - ◊ Increase mobile access to major campus applications that support student success.
 - ◊ Implement a solution to route, approve, and retrieve academic documents (e.g., annual evaluation, conflict of interest, program review).
 - ◊ Increase analytic support for early warning activities and tracking learning outcomes.
- Research, Scholarship, and Creative Activity:
 - ◊ Establish technology standards and design IT architecture for quicker deployment of research technology.
 - ◊ Develop research-specific data management solutions (e.g., archiving, curation, accessibility, rights management, security).
- Academic Health Center:
 - ◊ Provide the institutional technology support and collaboration to complement the specialized health care technology services being developed in support of the Academic Health Center.
- Community Partnerships:
 - ◊ Improve technologies to provide lifelong connections for university alumni.
 - ◊ Expand use of learning management system to offer online continuing education courses to the community.

Office of Decision Support

The Office of Decision Support is responsible for supporting the university leadership in its commitment to accountability and evidence-based decision making. By bringing together the interrelated areas of institutional research and effectiveness, data governance, data warehousing, and business intelligence the office provides a comprehensive foundation for data collection, integration, research, analysis, and reporting including:

- Promoting a culture of data-driven decisions, actions, and outcomes across campus.
- Providing research and analysis to assist the university in both highly effective operations and advancing its strategic plan goals particularly around student achievement; community partnerships; and research, scholarship, and creative activity.
- Working with campus partners, particularly the Office of Information Technology, to provide a data infrastructure that is accessible enough to be leveraged by all levels of users within academic and business units while maintaining appropriate security.
- Developing and maintains data governance standards including a centralized data dictionary and tool, and data training to allow for ease of adoption of the data environment across campus.

Objectives

- Expand data infrastructure to allow for a full operational data store as well as enterprise warehouse functions in the key enterprise data areas.

- Develop a broad and useful set of standard content to allow end-users to more easily adopt the reporting environment.
- Re-energize the data governance process to update and expand the data dictionary and expand centralized training efforts.
- Create and widely distribute a set of standard research briefs to better inform campus and the broader community about the university's strategic efforts.

Proposed Academic Programs

Unit	New Program Name/Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
Allied Health					
	B.S. O.T.A. Occupational Therapy Assistant	Occupational therapy assistants work collaboratively with occupational therapists to provide rehabilitative services to people of all ages.	2020–21	\$450,000	Differential Fees
	B.S. Health Science	This program will focus on training students for jobs as health educators.	2020–21	\$400,000	None
Business					
	Ph.D. Business	Implementation of the university's first doctoral program in business.	2020	\$315,000	None
Dental					
	Dental Public Health (DPH) Residency Program	12 month certificate program offered to dentists planning careers in Dental Public Health with a focus on assessment, policy development and assurance.	2019–20	Less than \$1.7M; the program will become self-supporting	Grants
	M.S./Ph.D. in Dental Materials (MSDM)	For students interested in research in the field of dental materials.	2020–21	Under \$500,000; the program will become self-supporting	Grants
Education					
	Ph.D. School Psychology	This program prepares graduates for research and academic careers as well as for general practice and health service provider specialty in professional psychology.	2020	1–2 tenure track faculty	Grants
	Ed.S. Special Education	Producing professionals in special education remains one of highest priorities in the state of Nevada.	2020	1–2 tenure track faculty	Grants

Unit	New Program Name/ Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
Engineering					
	M.S. Experience Design	A higher-level degree for Entertainment Engineering and Design B.S. program graduates.	2020	Three faculty positions over three years- \$400K for faculty salary and benefits. Three MS GRAs for two cohorts.	Philanthropy, grants, and industry support
Fine Arts					
	B.A. Entrepreneurial Arts	A degree to develop artists with unique skill sets such as business, management, and law that can translate to represent “creatives” across a wide range of industries.	2020	None	None
	Master of Landscape Architecture	This is the terminal degree in landscape architecture.	2020	None at present	None
Law					
	LL.M. in the American Legal System	A general LL.M. for internationally educated attorneys who can take general courses or tracks that mirror existing J.D. concentrations.	2020–21	None	None
Liberal Arts					
	B.A. Japanese	Based on enrollment in Japanese courses and the minor, demand is indicated for a major.	2020–21	\$130,000 Two additional full-time faculty positions.	None
	B.A. Chinese	Based on enrollment in Chinese courses, demand is indicated for a major.	2020–21	\$65,000 One additional full-time faculty member.	None
Sciences					
	Ph.D. Biochemistry	Biochemistry Ph.D.s are experts in chemical and physical processes that occur within living organisms. Graduates are prepared to enter professional careers in academia, pharmaceutical research (drug development), biomedical industry, public health, and related fields.	2020	None	Grants
	M.A. Life Sciences	Non-thesis Masters of Arts program in the School of Life Science intended as a terminal degree that prepares students for professional careers.	2020	Four dedicated graduate fellowships or assistantships per year for the first four years (four cohorts).	None

Unit	New Program Name/ Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
Interdisciplinary					
	Ph.D. Water Studies	Graduates will have broad background in Water Studies spanning technical issues of management, reclamation, use, policy, law and applications. They will be able to find employment in research institutes, academia, Water Districts and industry.	2019-20	Administrative Assistant @ \$65K. Four dedicated graduate fellowships or assistantships per year for the first four years.	Grants
	Ph.D. Neuroscience	Interdisciplinary training for research on the neural basis of behavior, including approaches from neuropsychology, cognitive neuroscience, behavioral neuroscience, developmental neuroscience, and psychopharmacology.	2020-21	\$400,000 2 Asst. Prof. 7 12-month GAs 1 grant-supported Administrative Assistant	Grants and philanthropic support
	B.S. Cybersecurity	Undergraduate program that teaches skills for students to enter the workforce as cyber analysts or related areas.	2020	\$250,000	Philanthropy, grants, and industry support
	M.S. Cybersecurity	Graduate degree training in cyber skills needed for individuals to manage and lead cyber functions for organizations.	2019	\$375,000	Philanthropy, grants, and industry support
	Ph.D. Cybersecurity	Advanced degree that allows graduate students to engage in research in preparation to enter academia.	2022	\$300,000	Philanthropy, grants, and industry support
	Ph.D. Materials Engineering	Graduates will have broad background in Materials Science and Engineering covering theoretical design and simulation, experimental development and creation of novel materials with unique and tailored properties and applications surrounding these materials. They will be able to find employment in research institutes, academia, and industry.	2020	Administrative Assistant @ \$65K. Four dedicated graduate fellowships or assistantships per year for the first four years.	Grants
	M.S. Data Science and Machine Learning	Graduates will have in-depth background in Data Science covering Statistics and Computer Science principles including database, data security, data mining, developing algorithms to fit applications, and machine learning. They will be able to find employment in research institutes, academia, and industry. In addition, they will be able to pursue Ph.D. degrees.	2020	Two Faculty positions. Administrative Assistant @ \$65K. Four dedicated graduate fellowships or assistantships per year for the first four years.	Philanthropy, grants, and industry support



UNIVERSITY OF NEVADA, RENO

Strategic Themes and Objectives

The university's Mission & Core Themes, developed in its most recent Strategic Plan for the years 2015-2021, are below. The mission statement and core themes as stated in the prior planning report haven't changed, nor have the goals of the individual core themes. However, the strategic plan is a "living document" that is being continually assessed via a series of metrics that have been honed over the last few years. In 2015 the Provost's Office established four committees (representing the three core themes and the overarching theme of Stewardship & Sustainability), each charged with revising and proposing the metrics for their respective theme, setting institutional targets for 2021, and annually evaluating the university's progress towards those targets. These committees provide assessment results and recommendations pertinent to their respective themes to the Academic Leadership Council and President's Council each spring.

Mission:

Inspired by its land-grant foundation, the University of Nevada, Reno provides outstanding learning, discovery, and engagement programs that serve the economic, social, environmental, and cultural needs of the citizens of Nevada, the nation, and the world. The University recognizes and embraces the critical importance of diversity in preparing students for global citizenship and is committed to a culture of excellence, inclusion, and accessibility.

During 2019-23 the University of Nevada, Reno will continue to focus its efforts on the following Core Themes:

Theme 1 – Learning: Prepare graduates to compete globally through high-quality undergraduate and graduate degree programs in the liberal arts, sciences, and selected professional programs.

Theme 2 – Discovery: Create new knowledge through basic and applied research, scholarship, and artistry in strategically selected fields relevant to Nevada and its role in the wider world.

Theme 3 – Engagement: Strengthen the social, economic, and environmental well-being of people by engaging Nevada citizens, communities, and governments. Be formally recognized as setting the standard for land-grant universities

The online version of CT 3 reads, "Strengthen the social, economic and environmental well-being of Nevada citizens, communities, organizations, and governments through community outreach and reciprocal partnerships."

Academic Programs

The following programs were supplied by departments and colleges as in the planning stages for the years 2019-2023 and beyond. Planning for these programs is at varying stages within the departments. Depending on the planning stage for these programs, the date of implementation, estimated cost and funding sources may be unknown.

New Program Name/Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
B.S. in Aerospace Engineering	Includes engineering of air (fixed and rotary wing) and space flight systems, including (1) system dynamics/control, (2) solid mechanics/materials; (3) thermal/fluid science and propulsion, (4) design; and (5) advanced high-strength/lightweight manufacturing.	Fall 2020	Startups for 7 new faculty: \$3.5M startup packages, seven 300 sq. ft. labs, four 150 sq. ft. faculty offices, 28 graduate student office space.	Industry and federal sources
M.S.in Cybersecurity	New MS degree in Cybersecurity. This is a popular minor and the MS is required for our intended for collaboration with Pearson (to offer an online MS in cybersecurity). We have defined the curriculum for this and started the approval process for this degree in Curriculog (currently it is being reviewed at the college level)	Fall 2019	Under discussion (ideally a faculty position as our department currently has a faculty-to-student ratio of 1:38).	Pearson's online MS program.
Ph.D. in Business Administration	This new degree program was approved by the Board of Regents in November 2017. Implementation has been delayed and is now estimated to be Fall 2019.	Fall 2019	Two full-time GA positions have been provided. An additional two are needed at an estimated cost is \$50K.	None
Online MSBA (Master of Science in Business Analytics)	Prepares students to launch a career exploring and analyzing data to identify, understand and answer questions that are critical to organizations. The degree program integrates knowledge and skills in big data management, quantitative methods, organizational decision making, and information communication in order to address significant questions.	1/2020 (optimistically...)	Separate start-up and self-sustaining funding through Pearson	N/A
Joint MSW-MBA	This program is needed to meet the growing demand for individuals to fill leadership positions in health and social service agencies by providing management and leadership skills education.	Under discussion	Under discussion	None
Ph.D. in Social Work	UNR will be the first and only university in the state of Nevada to offer a Ph.D. in Social Work. Currently our students have to go to Utah, California, etc. to obtain the degree.	Under discussion	Under discussion	None
Ph.D. in Media and Engagement	Provides a doctoral education in media and engagement, emphasizing the use of mediated communication for purposes of community and audience engagement. Draws upon faculty in Communication Studies, Education, English, and Public Health, as well as Journalism.	Fall 2021	Five GA positions at approx. \$100,000	Additional revenue generated through fees for development of engagement campaigns for community and medical clients.

New Program Name/ Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
M.A. in Design and Innovation	A new interdisciplinary master's program in design thinking that trains students in empathetic, human-centered design principles and provides framework for innovation and invention. The program will require students to design and carry out an industry-focused studio project. The Graduate School will partner with the Innevation Center and private industry partners to design and review curriculum and place graduates in industry positions.	Under discussion	\$200,000/yr.	Private sector partner-ships; possible funding from Workforce Innovation for a New Nevada Grant program.
School of Social Work	Change from the current School of Social Work to an independent school led by a dean.	July 2019	No change to budget	None
M.S. Statistics	The current emphasis of Statistics in M.S. program will become a separate degree program.	Fall 2019	No additional cost	N/A
Ph.D. in Mineral Resources Engineering	This will be as a result of a request for a name change of the Ph.D. in Geo-Engineering program so that it will better reflect the research emphases of these degree recipients.	Fall 2019	No additional cost	N/A
B.S./B.A. Geography w/ Urban Geography and Planning Specialization	This is an added specialization within the existing B.S./B.A. degrees in Geography to allow current majors to focus on urban geography and land use planning.	Fall 2020	No additional cost	N/A
B.S./M.S. Analytical Chemistry	This is a 5-year accelerated degree to allow students to become professional analytical chemists with a non-thesis advanced degree.	Fall 2020	No additional cost	N/A
M.S. and Ph.D. in Plant Science	The Department of Agriculture, Nutrition and Veterinary Sciences (ANVS) is planning to establish these programs. Students will receive graduate training in plant production related disciplines including agronomy and horticulture. The rationale for these new programs is that graduate students are needed to support the research and teaching mission of ANVS.	2020	Under discussion	None
B.S. and M.S. in Agribusiness	This new undergraduate and graduate degree would be a collaborative/joint effort between CABNR and the College of Business	Fall 2020	Under discussion	None
B.S. Environmental Science (NRES)	The department plans to remove the Ecohydrology B.S. degree program and incorporate it as an emphasis in Environmental Science.	Fall 2019	None	N/A
B.S. Forest Management & Ecology (NRES)	The department plans to change the name of this program to Wildlands Ecology and Management.	Fall 2019	None	None

New Program Name/ Expansion of Existing Program	Brief Description	Date of Implement ation	Estimated Cost	Funding Sources Outside of State Dollars
B.S. Wildlands Ecology and Management (NRES)	The department plans to move the Restoration Ecology and Conservation emphasis from the Environmental Science major to the Wildlands Ecology and Management major.	Fall 2019	None	none
M.S. in Nutrition integrated with the Dietetic Internship: Nutrition MS/DI (NUTR)	This change will address the requirement for the RDN credential that starts in 2024.	2020	Five faculty (including three full-time lecturers); Program Director; Program Coordinator; administrative assistant;	In discussion with Pearson to fund expenses related to the online option
B.S. in Food Science and Toxicology (NUTR)	This degree in food science and toxicology addresses the College's Mission for a sustainable and safe food supply.	Unknown	Extensive – new faculty lines and lab space required.	None at this time
Ph.D. in Nutrition (NUTR)	The department hopes to expand its graduate program beyond the master's level by adding a Ph.D. degree program.	2021	Two additional tenure-track faculty; start-up, office, and lab space.	None at this time
M.S. Degree, Ecology, Evolution and Conservation Biology	Plans are underway to add this degree option to the existing Ph.D. program in EECB.	Fall 2019	None	N/A
Molecular Biosciences Program(s)	Work is ongoing on the merger of three existing graduate programs into one Molecular Biosciences Program: Cell and Molecular Biology, Cellular and Molecular Pharmacology and Physiology, Biochemistry.	Fall 2019	No change in budget	N/A
Department of Emergency Medicine	There are plans for a new Department of Emergency Medicine to replace department that transitioned to UNLV.	July 2019	\$750,000	Private Emergency Medicine Group
Clinical Laboratory Science Program	National Certificate and Master's Degree Program in Medical Terminology	July 2021	Self-sustaining	N/A
Department of Neurology	This is an important area for the School of Medicine curriculum worthy of its own department.	July 2020	\$750,000	Renown Health
MS, Biostatistics	The Biostatistics MS program will train students who intend to plan and conduct quantitative analysis in public health, medicine and biology.	Fall, 2019	This program will replace the existing Biostatistics emphasis in the MPH program; thus resources already exist to support the change. Salary expenditures are estimated at \$290,000 in Year 1.	Grant funds may be obtained to support graduate assistantships.
M.S. in Environmental Health	The M.S. in Environmental Health will emphasize the public health components of environmental and occupational health issues and collaborate with Environmental Science MS/PhD	2020	1 GA position \$17,000+tuition waivers	None
M.S. in Kinesiology	This will be a new M.S. program addressing the demand for pre-PT/OT and sports training by students graduating with the B.S. Kinesiology emphasis in CHS.	2020	1 tenure track faculty position (bundled assistant professor position) 3 GA positions \$17,000+tuition waivers Temporary faculty salaries @\$4000/class for 8 classes per year	None at this time although heavy laboratory work may generate student fees
Ph.D. in Public Health, emphasis in Health Policy	The plans are to add an additional emphasis to the Ph.D. in Public Health to address Health Policy with a goal of improving poor Nevada health statistics and informing policy makers in the state.	2022	5 GA position, \$18,500+ tuition waivers (additional faculty already part of bundled hires; Assistant Professor tenure track)	None at this time

New Program Name/ Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
Doctor of Physical Therapy/ Occupational Therapy	This program will provide an advanced professional degree to UNR B.S./M.S. graduates to address significant workforce capacity issues in Northern Nevada	2023+	2 assistant professor tenure track faculty @ \$84,000 annually plus benefits; Director position at Associate Professor level @ \$96,000 annually plus benefits; 5 GA positions at @\$18,500 each + tuition waivers	Tuition fees for professional degree program; external community support for clinical training and clinical training sites
B.A. in Cinema and Media Studies/B.A. in Cinema Arts	This is an interdisciplinary degree program in film studies, encompassing (but not limited to) critical/interpretive, historical, and production approaches to areas in cinema theory, aesthetics, and criticism. Students will take coursework in various disciplines, and graduate career-ready for practice in the film industry. Foundational coursework delivered by English and Art departments in CLA, and by the Reynolds School of Journalism	Fall 2020 at the earliest	Under development as part of CLA strategic planning. Specific resources should be determined by 2019-20.	None
B.A. in Applied Liberal Arts	This is an interdisciplinary degree program in applied arts, humanities and social sciences, encompassing (but not limited to) critical/interpretive, historical, and production approaches to next-generation systems analysis and design thinking. Students will take coursework in various “applied” domains of the traditional disciplines, and graduate career-ready for creative, professional practice of the future (professional communications, problem-solving, invention, cultural engagement). Foundational coursework delivered by arts, humanities, and social science departments.	Fall 2020 at the earliest	Under development as part of the CLA strategic planning. Specific resources should be determined by 2019-20.	Funding possible through partnering and grants with community businesses and profession.
BA in Science Studies	Interdisciplinary degree program encompassing (but not limited to) ethics and science/technology; science communication; science as a social practice; history of science. Foundational coursework delivered by English, History, and Philosophy departments.	Fall 2020 at the earliest	Under development as part of CLA strategic planning. Specific resources should be determined by 2019-20.	None
B.A. in Global Studies	Interdisciplinary degree program encompassing (but not limited to): global political economy and international studies; global governance, human rights, social justice, and civil society; global cross-cultural studies, linguistics, philosophy, religion, and arts; global diversity and intersectionality—class, race, and gender studies on a global scale. Foundational course work delivered by Political Science, History, World Languages and Literatures departments.	Fall 2020 at the earliest	Under development as part of CLA strategic planning. Specific resources should be determined by 2019-20.	Possible additional grant funding for curricular development beyond the research institute already funded.
MA in Gender, Race and Identity	This program has received required approvals but has not yet been launched due to lack of funds for teaching assistants.	Fall 2019	Two joint tenure-track appointments and three lecturers hired for 2018-20 hiring cycles. Three tenure-track hires to be made in 2020-22. Two graduate assistantships at \$15,500 plus fringe each.	None

New Program Name/ Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
Law and Society (undergraduate interdisciplinary certificate program, post-professional M.A.)	An area of undergraduate, graduate, and/or post-professional study potentially encompassing (but not limited to): pre-professional Justice Studies and Pre-Law; critical legal studies, law in communities, law and culture, law and society; professional and post-professional studies in Law.	Fall 2020 at the earliest	Under development as part of CLA strategic planning, coordination with Judicial Studies Epicenter. Specific resources should be determined by 2019-20.	Funding possible through partnering and grants with community businesses and professions
Accelerated B.A./M.A. in Criminal Justice	This will be proposed as an expansion of existing B.A. and M.A. programs (a five-year program).	Fall 2019	Operating and recruiting budget is estimated at \$1,000. We will also be discussing adding an additional 20 hr. TA position and a possible new academic faculty position to teach graduate elective classes.	To be discussed.
Graduate Certificate in Criminal Justice	A graduate-level transitional, post-professional certificate requiring 18 criminal justice graduate credit hours. The certificate is designed to meet the needs of three different groups of people: 1) Students who have just graduated with a BACRJ degree and are seeking employment in a criminal justice field. It takes an average of up to a year to secure employment in a government criminal justice position. Earning a certificate will provide knowledge and skills which should aid this group in securing a position but does not commit them for two years to earn a Master's degree in criminal justice; 2) Individuals working in the criminal justice field with a bachelor's degree who are seeking additional skills, knowledge, and experiences to aid them in their career and life goals. For example, the skills could aid them in securing a promotion; and 3) Individuals who wish to explore earning a criminal justice Master's degree but do not wish to commit at the time. They could earn the certificate at the time and come back later to complete the Master's degree.	Fall 2019	No additional resources required.	None
Ph.D. in Criminal Justice/ Criminology	Graduates will apply a variety of research methodologies to the study of crime causation, social reaction, and the legal system. Program will emphasize the relationship between theory and practice, as well as the interconnected activities of the many agencies and professions involved in the systems of justice and private security. Graduates can contribute to the development of research-supported, improved systems for the prevention and control of crime and delinquency.	Fall 2021-22 at the earliest	Additional tenure-line faculty (in areas of specialization TBD) will be required.	To be discussed.
BFA in Graphic Design	The Graphic Design BFA emphasizes hands-on design approaches, while critical analysis, theory, research, and application will be explored. Students will become well-versed in Graphic Design competencies that directly relate to marketplace requirements for hiring. The BFA will provide industry gold-standard preparation, with students producing a portfolio of work across the graphic arts and design disciplines.	Spring or Fall 2019	One new tenure-track faculty position hired; one lecturer position committed; at least one additional tenure-line and one lecturer position anticipated and supported. Computer classroom dedicated and renovated; one additional computer classroom space under renovation (committed).	No outside funding sources committed at this point; to be discussed.

New Program Name/ Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
B.A. in Spanish: Spanish through the Professions Specialization	This degree will require 13/30 credits in Spanish linguistics and composition (Intro. to language, Spanish in the US, Second Language Acquisition, Theoretical Applied Linguistics, Spanish Composition).	Fall 2019	We are searching this year for a regular lecturer in Spanish through the Professions and for a tenure-track Assistant Professor of Spanish with expertise in translation and/or translations studies AND literature, linguistics, or cultural studies.	N/A
B.A. Musical Theatre	A Bachelor of Arts degree in musical theatre is under departmental discussion and curriculum development (pre-proposal under review). This is an interdisciplinary academic degree with a curriculum that focuses on the development of performance skills in dance, music, and theatre. The degree plan will offer a 4-year course of study, incorporating course work in history, pedagogy, and performance in each of the three areas of study.	Fall 2019 at the earliest	Before implementation of this new degree plan, the music and theatre/dance departments have added tenure-track hires in directing (theatre), and in musical theatre voice (music). A lecturer in musical theatre dance and an Administrative Faculty position in costume design have also been hired.	Musical Theatre does not have outside funding sources identified at this point.
DMA	An applied doctorate in musical arts is under departmental curriculum development for submission as a pre-proposal. This is an academic degree with a curriculum that establishes emphases, in its curriculum, on both the student's performance and graduate-level scholarship in music. The degree would offer a 3-year course of study, incorporating course work in theory, musicology, and performance practice, as well as required applied performance.	Fall 2020	Before implementation of this new degree plan, the music department would need two tenure-track hires in support of the curriculum: a music theorist/ composer and a musicologist/ ethnomusicologist (the latter was hired last year).	Music does not have outside funding sources at this point.
BA in Gender, Race, and Identity with concentrations in existing areas (Women's Studies; Ethnic Studies, Religious Studies, and Holocaust, Genocide, and Peace Studies) and new areas (such as Sexuality Studies, Indigenous Studies, Latino/a Studies, Disability Studies)	This will be a new interdisciplinary major that will incorporate existing concentrations of coursework in the area of identity, diversity, and culture studies and introduce new concentrations in other areas. In addition, each of area of concentration will be available independently (outside of the GRI major) as a minor. Some of these minors already exist; others will need to be proposed and approved.	Fall 2019	5 new joint hires in GRI have been approved with two of those hires completed in FY18; 3 lecturer positions hired in FY18.	N/A

The process for approving new programs at the University of Nevada, Reno includes a pre-screening process to review the program in terms of available resources, program viability, and connection to University or NSHE strategic plans and goals. If approved, a detailed proposal is prepared and is reviewed by relevant college and department committees, the University Courses and Curricula (UCC) Committee, and, if a graduate program, by the Graduate Council. Once a new program proposal has been reviewed and approved at all appropriate levels, it is brought to the NSHE Academic Affairs Council and the Board of Regents' Academic and Student Affairs Committee for approval. The institution's accrediting body, the Northwest Commission on Colleges and Universities, also receives the University's application for approval of any new degree and certificate programs in order to approve the change as minor or substantive.

As a result of this rigorous review process, the date of implementation is often an estimate; however, it is expected that all programs listed will be brought for consideration during the planning horizon of 2019-23. All programs at the University that generate student FTE are supported by state-appropriated funds through the higher education funding formulas and no new enhancement funds would be requested to support any of these programs.

Undergraduate Success Programs

The University of Nevada, Reno has a number of initiatives to increase retention, graduation rates, and student success following graduation. New professional advisor positions have recently been added to decrease the student:advisor ratio to below 500:1, and new advisor positions will be added over the period of this plan with the long-term goal of approaching a 300:1 ratio that is characteristic of national best practice.

The University has joined the Student Success Collaborative of the Education Advisory Board, and has invested in their SSC Campus analytics system to track student progression, identify and reach out to at risk students, and to coordinate advising notes and utilization of academic support centers. All academic units with undergraduate majors will be using the SSC Campus system during the planning period. In addition, there are some support units that will also be added during the planning period to help create a better foster the coordinated care model that is facilitated by the program. These units include tutoring centers, Office of International Students and Scholars, Upward Bound, First in the Pack, TRiO programs, Counseling Services, Financial Aid, and The Center: Every Student, Every Story.

The University has continued to expand the NevadaFIT academic bootcamp program for first year students, which takes place the week before school starts. Students earn one-credit for participating in this rigorous program which helps equip students for success in college. The program has grown every year with 48 students in 2013, 352 students in 2014, 410 in 2015, 973 students in 2016, 1,345 students in 2017, and 1,620 in 2018 (almost half the freshmen class). There are eight bootcamps in total, one for each college, and all majors are now welcome to participate. The College of Science, the College of Agriculture, Biotechnology, and Natural Resources, and the College of Education require NevadaFIT for incoming students who have declared majors in their colleges, and the College of Engineering plans to require the program for NevadaFIT 2019. Total participation for NevadaFIT 2019 is expected to reach approximately 2,000 participants. NevadaFIT continues to have a notable impact on student retention and GPAs, with an average GPA increase of .13 and an average one-year retention increase of 7% for NevadaFIT participants compared to non-participants. The program particularly impacts first generation students, minority students, and low-income students. For example, approximately 37% of NevadaFIT participants are first-generation students, and fall-to-spring retention of these students was 11% higher than first-generation non-participants in 2016.

In Fall 2016 the University launched its new Silver Core general education program. This program is founded upon the assessment of student learning in fourteen Core Objectives developed by UNR faculty. The objectives include new focus areas on experiential learning, ethics, technology, globalization, and communications skills. By design, the Core Objectives are integrated into the requirements of degree programs whenever possible. Courses satisfying Core Objectives are being assessed on a five-year cycle based on discipline. Initial assessments of student learning outcomes will be used to refine and direct the design of the Silver Core, which is intended to be a dynamically evolving general education program. In addition to assessing student learning within Core courses, UNR faculty also continue to engage in the refining of the Silver Core by:

- considering alternative pathways to deliver the general education mathematics requirement, such as those not requiring precalculus as a prerequisite.
- aligning the expectations for development of Core Objective 1 (Composition and Communication) beyond general education with President Johnson's Composition and Communication initiative, providing enhanced instruction in composition and communication in the disciplines.
- aligning student learning outcomes within general education courses with the Interstate Passport block transfer system.

Graduate School

The University of Nevada, Reno is vigorously pursuing policies to improve the graduate student experience, expand graduate program offerings, and substantially increase the number, diversity and career preparedness of its graduate students. Since 2013, UNR has increased the base stipend for doctoral graduate assistants (GA) by 36% and added 135 state-funded GA lines, with additional GA lines anticipated as UNR substantially increases the number of tenure-track faculty between 2014 and 2021. In order to be competitive with regional R1 and R2 universities in STEM disciplines, in FY19, UNR increased the base graduate assistant stipend for STEM doctoral students to \$19,000, and differentiated base stipend amounts by degree type and field of study (STEM Doctoral > Social Sciences/Professional Doctoral > Humanities Doctoral > Master's). UNR is investing in centralized digital recruitment campaigns, the [GradFIT](#) recruitment boot camp for first generation and underrepresented students, the [Gradventure](#) campus visitation program, and the [Graduate Dean's Awards](#), a generous fellowship and merit scholarship program. The Graduate School has also invested in new TargetX application software to enable state-of-the-art application submission via mobile devices. In 2016, UNR partnered with Pearson Embanet to create fully online master's programs in Social Work and Public Health. These new fully online master's programs already enroll more than 400 students and provide rural Nevada communities with access to graduate degree programs. Efforts to enhance graduate education are beginning to yield significant benefits as new graduate student numbers increased by 6.9% between Fall 2017 and Fall 2018, and the overall number of master's and doctoral students increased by 6.7% and 13.5%, respectively.

UNR and the Graduate School are engaging in a several initiatives to improve graduate student success and raise the profile of graduate education on campus. In 2014, the Graduate School introduced the [Three Minute Thesis @ Nevada competition](#) and augmented funding for graduate student conference and meeting travel by \$100,000. UNR is also greatly expanding graduate program offerings in cutting-edge scientific fields and professional programs aimed at supporting Nevada's infrastructure and economy. Recently established graduate programs include the interdisciplinary Integrative Neuroscience MS and PhD programs, the Mathematics PhD program, the Statistics and Data Science PhD program, the MS and PhD programs in Animal and Range Science, the online Master of Social Work Program, the online Master of Public Health Program, the MA in Communication Studies and the Master of Physician Assistant Program. Forthcoming programs include an MA in Design and Innovation, a Doctor of Musical Arts and a PhD in Business Administration, as well as fully online master's programs in Accountancy, Business Analytics, Cybersecurity and Nutrition.

The Graduate School is also greatly expanding professional development services to enhance graduate education, career attainment and postdoctoral fellow training. In 2015, UNR became a sustaining member of the National Postdoctoral Association and established the [Office of Postdoctoral Affairs](#), whose mission is to enhance postdoctoral experience and training by providing postdoctoral fellows, faculty, and administrators with information regarding institutional

policies, career development opportunities, and other issues relevant to postdoctoral mentoring. In partnership with the Graduate Student Association (GSA), in 2016-17 the Graduate School developed a [Professional and Career Development Series](#) that includes workshops and seminars on topics such as grant writing and fellowships, interviewing skills, and motivation and personal growth. Studies by the National Science Foundation, the National Institutes of Health and other governmental agencies have established that centralized professional development efforts aid in the recruitment of new students, provide an important tool for expanding diversity efforts, contribute to stronger academy-industry engagement, and can lead to enhanced interdisciplinary collaborations. In Fall 2018, the Graduate School embarked on two major initiatives to enhance training of graduate teaching assistants (GTAs), improve workforce development and promote degree completion. First, the Graduate School partnered with the Association of College and University Educators (ACUE) to offer a 3-credit graduate course in Effective Teaching Practices for GTAs. Successful completion of the course provides GTAs with a nationally-recognized Certificate in Effective College Instruction endorsed by the American Council on Education (ACE). Second, in July 2018, a team of UNR faculty attended an intensive mentor training workshop at the University of Wisconsin, Madison through the National Research Mentoring Network ([NRMN](#)). Under the direction of the Graduate School, these faculty are leading a series of workshops for both graduate faculty and graduate students in evidence-based mentoring practices.

Division of Health Sciences (DHS) and the University of Nevada, Reno School of Medicine (SOM):

- Make major investments in clinical and translational (C & T) research infrastructure in Reno to support a significant increase in funded C & T research, in collaboration with Renown Health and other hospital partners, and create new partnerships with successful and well-funded basic science research programs.
- Restructure Division of Health Sciences with independent school of social work, reporting to the Provost.
- Realign other components of DHS, including the Sanford Center on Aging, Center for the Application of Substance Abuse Technologies, the Student Health Center, and the Department of Speech Pathology and Audiology with the School of Medicine and other independent academic units.
- Create new consortium of Health Sciences disciplines and leaders to develop collaborative research and teaching programs.

Student Services

The following table summarizes the new UNR student services plans to implement in the period 2019-2023:

Brief Description of New/ Expanding Student Services	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
Freshmen mentor program	2019-21	\$100,000	Soft funds
Housing Scholarships for TRIO students	2019	\$20,000	Auxiliary
Math Placement Initiative	2020	\$12,000	Donor
Gender, Race & Identity Residence Floor	2020	\$15,000	Auxiliary
Reopen Manzanita Hall	2019	\$4 million	Auxiliary

Research and Innovation Initiatives

The **vision** of Research & Innovation (R&I) is that the University of Nevada, Reno will be a global leader in developing solutions to state, national and international grand challenges through excellence in fundamental, applied and translational research, scholarship and innovation.

The **mission** of the research and innovation enterprise at the University is to create an environment that will enable the faculty and students to excel in their research, scholarly, creative and innovative activities, and enhance the status of the University of Nevada, Reno as an internationally recognized high-impact research university.

The mission of R&I's activities is aligned with the goals of the University's [Institutional Strategic Plan](#) and with the needs of the region and the state.

R&I supports the university-wide goal to attain the Research University R1 classification by 2023 by adopting the following actions:

- Support world-class research, innovation and commercialization
- Develop major existing and emerging research areas
- Provide highest quality services and competitive infrastructure that will enable faculty, students and staff to excel in their research, scholarly and creative endeavors
- Minimize administrative burden on faculty
- Provide a safe work environment
- Foster ethical conduct and adhere to regulatory requirements

The activities of R&I will be driven by our core values: integrity, the pursuit of excellence, fairness, respect, and collaboration.

R&I aims to provide the University faculty with streamlined, organized, and efficient access to all information and processes necessary to conduct research, scholarly and creative activities and facilitate innovation and entrepreneurship at the University.

Structure of Research & Innovation division:

- Research & Innovation is a faculty-first service organization; it will adopt the “Anticipate, Communicate, Train” (ACT) approach.
- Research & Innovation is finalizing a Strategic Plan that is aligned with the University’s Strategic Plan.
- Dr. Ana de Bettencourt-Dias, Professor of Chemistry at the University of Nevada, Reno, was appointed as the Associate Vice President for Research in June 2015. She supports faculty research development, and oversees the core facilities and the Office of Undergraduate Research.
- A national search for the Assistant Vice President for Enterprise and Commercialization was conducted. Dr. Ellen Purpus was selected, and she has been in the office since October 2015. She oversees Enterprise & Commercialization activities (formerly Technology Transfer), the Innevation Center, Nevada Industry Excellence, and Nevada Center for Applied Research (NCAR).
- A national search for the Director, Innevation Center was conducted. Mr. Jim Sacherman, a Silicon Valley veteran and serial entrepreneur was selected. He has been serving in that role since April 2016.
- A national search was conducted for the Director, Nevada Center for Applied Center (NCAR). Dr. Carlos Cardillo was selected, and he has been serving in that role since November 2015. NCAR is a stand-alone research and development center that leverages the University’s physical (laboratories) and intellectual (faculty, staff and students) assets to enhance the competitiveness of Nevada’s industry.
- A Proposal Capture Team was established. Ms. Lisa Genasci was selected as the proposal capture manager to lead the team through a national search.
- The Director for Undergraduate Research was recruited. Dr. Scott Mensing, Professor of Geography, University of Nevada, Reno was selected. He has been serving in that role since May 2015.
- The institutional repository was established in collaboration with the library. Mr. Rohit Patil was hired to lead to manage Scholarworks.
- The Nevada Research and Innovation Corporation (NVRIC) was incorporated in August 2016.
- R&I aims to create and foster an environment that will enable innovation among faculty, staff and students.
- R&I aims to invest in electronic software to manage and organize business transactions related to research – pre- and post-award, IRB, conflict of interest.

Implement programs to enhance faculty competitiveness

- Competitive proposal development initiatives
 - a. Grant-writing seminars and workshops and faculty writing groups.
 - b. Proposal development assistance (budget development, external reviews of proposals, editorial assistance, graphic design assistance).
 - c. Implement a Grant-writing Mentors Program for junior faculty.
 - d. Building relationships with regional companies/industry – partnering on large funding opportunities.
 - e. Research Enhancement Grants as a competitive program to enable re-submission of fundable proposals after initial rejection.
 - f. Seed funding mechanisms to support scholarly, creative and artistic activities, such as the Faculty Research Travel Grants program for CLA and Journalism.
 - g. Establish other internal research funding mechanisms.

- h. Complete hiring of the Proposal Capture Team to facilitate development of large multi-institutional, multi-faculty and interdisciplinary proposals. The team is comprised of a Proposal Capture Manger, and budget-development personnel. Graphic design is provided through outside experts. Hire a graphics expert for the team.
- Enhance research infrastructure
 - a. Equipment grants to be competitively awarded to faculty for enhancing instruction and research.
 - b. Support equipment grant applications, such as NSF Major Research Instrumentation, Defense University Research Instrumentation Program, etc.
 - c. Enhance the Shared Research Facilities through strategic equipment purchases and optimization of the research space.
 - d. Hired an IT/software development person in R&I. Software was developed for the distribution of F&A to departments and principle investigators to reduce the burden on the dean's offices in the future, additional programming will continue to provide both historical and current reports.
 - e. A partnership with Renown Health, established in January 2017) will provide unprecedented access to University faculty for fMRI (functional Magnetic Resonance Imaging) research related to brain research.
 - f. Established the high-performance computing (HPC) facility, Pronghorn. The partnership with Switch has enabled the University to continue expansion of Pronghorn – the partnership provides the University with significant amount of space, cooling, power and security; all of the essential elements of a world-class HPC.
 - g. Establish an Advanced Imaging Core, and continue to enhance the capabilities of the existing core labs – Genomics, Proteomics, Bioinformatics and HPC.
- R&I Policies and Procedures
 - a. Streamline existing policies and develop new policies that promote research and ethical conduct of research on campus.
 - b. Established a Terminal Leave Benefit pool to reduce the financial burden on principle investigator, department and dean when a grant funded employee separates from the university.
 - c. UNR Med – Renown Partnership
 - ◇ Help establish clinical trials program within the partnership between UNR Med and Renown.
- Research Integrity Office- Streamlining procedures and processes
 - ◇ Strength and expand training opportunities on Responsible Conduct of Research
- Animal Resources – Streamlining procedures and processes
 - ◇ Prepare for the AAALAC International re-accreditation.
- Environmental Health & Safety – Streamlining procedures and processes
 - ◇ Develop online and in person training modules that re-enforces safety on campus such as the Safety Training for Academic Researchers (STAR) Lab.

Research Communications

- Hired a Director, Research Communications.
- Continue changes/improvements to the R&I website
 - ◊ Making all documents accessible
- Enhance the Industry Portal on the R&I website

Enhance Innovation and Commercialization Opportunities on Campus and in the Region

- Spur the growth and outreach activities of University of Nevada, Reno Innevation Center, Powered by Switch.
- Hire support personnel in the Office of Enterprise and Innovation.
- Established three Innovation Awards--Early Career Innovator, Innovator, Student Innovator.
- Established a Bio-Sciences Entrepreneurial Laboratory (BEL) to draw bio-tech industry to establish programs on campus and collaborate with UNR faculty to seek federal research and development funding. Starting a second BEL owing to the first-one being at capacity within 15 months of its opening.
- Significantly increase number of start-ups and spin-out companies on-campus and in the region.
- Support the innovation spaces (such as the DeLaMare Library and the InNEVation Center Makerspace) and other entrepreneurial resources on campus for students, faculty, staff, and community.
- Strengthen the technology licensing pipeline to increase the number of faculty innovations developed into products to benefit society.
- Establish a robust support system for faculty (and student) entrepreneurs.
- Enhance efforts to inform faculty about how to protect and commercialize research discoveries and innovations.
- Work with the non-profit Nevada Research and Innovation Corporation to boost commercialization efforts.

Other Research Initiatives

- Enhance interdisciplinary research and graduate teaching programs – Collaboratively with the Graduate School.
- Clarify policies for creation of Centers and Institutes. Establish world-class faculty- driven research centers and institutes.
- Streamline the F&A recovery distribution between centers, colleges and departments.
- Foster International research programs.
- Enhanced the Faculty Travel Grants – Competitive and in three phases.
- Support and enhance Undergraduate Research.
- Establish international undergraduate research programs.

Campus Facilities Master Planning:

- Carry out existing plans for expanding and realigning university office and research space in order to meet needs as the university grows, including:
 - ◊ Complete of a new performing arts building to adjoin Church Fine Arts by December 2018.
 - ◊ Complete construction of a new building for the College of Engineering by 2020.
 - ◊ Complete renovation of selected research space in Leifson Physics and the Chemistry

Building by May 2020.

- ◇ Complete renovation of selected research space in Scrugham Engineering by August 2019.
- ◇ Complete renovation of selected research space in Mack Social Science by October 2019.
- ◇ Continue to expand future use of Valley Road properties by the College of Agriculture, Biotechnology, and Natural Resources and the Agriculture Experiment Station.
- ◇ Complete planning for a possible new building for the College of Business.
- ◇ Initiate planning for a new life sciences research facility.
- Finalize plans and financing for the phased construction of new residential halls.
- Develop a plan for expanding childcare services for faculty, staff, and students.

Information Technology

The information technology initiatives outlined as part of the Strategic Plan are designed to promote and support the University's core themes through inclusiveness, innovation and empowerment. Each of the listed action items serve to support the University's common goals and stated mission.

- **Research Cyberinfrastructure (CI):** Created through cooperation between the Office of Information Technology, the Office of Research and Innovation, and the faculty-led Cyberinfrastructure Committee, the **mission** of UNR CI is to create a fabric of highly-connected and high-performance systems, both on campus and off, that serve end-to-end research workflows in a robust, responsive, and sustainable manner. The governing entities shall pursue projects, policy, sustainable funding mechanisms, workforce development, and alignment with national research technology platforms as outlined in the Campus CI Plan, a rolling 5-year strategic guide. Areas requiring development during this plan period include:
 - ◇ **Systems:** expand research computing, networking, security, data storage, server co-location, and external federation access.
 - ◇ **Finance & sustainability:** implement a balance of capital expenditure, core support funding, and cost recovery funding mechanisms.
 - ◇ **Education:** initialize a graduate assistantship program, provide internal and external training, and foster a community of practice and self-support.
 - ◇ **Program development:** establish CI branding and marketing, cross-domain team building, external partnerships, proposal support, and success metrics.
- Through the standing Data Governance Committee, update the campus data-governance plan and put in place data governance procedures to coordinate multiple institutional data sources to provide a common foundation for data collection, access, analytics, and reporting that provides common processes and tools across the institution for distributed use.
- Expand the University's cybersecurity program to include best practices and standards, such the procurement and implementation of an enterprise Identity and Access Management system (IAM); foster a culture of security awareness and communication among all organizations to improve compliance with governmental and industrial regulations for information management and security.
- Work with the other areas of the University to develop detailed business-continuity plans that includes alignment with the IT disaster recovery plan, testing of the plans to eliminate failure points and work with the Office of Organizational Resilience to raise awareness across the campus through training and focused exercises.
- Establish benchmark metrics, to measure all University IT services that demonstrate alignment and support of University wide goals. Continue to report on and refine these metrics and use them as an integral part of IT planning for current and future activity.

- Expand centralized IT support to better enable the growing and diverse campus community to engage in learning and discovery, by strengthening support with industry best practices and standards through services agreements, advancing our state-of-the-art service management systems, empowering end users by providing anywhere/anytime support through various means.
- Achieve and maintain a robust, redundant network infrastructure on a regular refresh cycle that includes 100 percent campus coverage of wireless access a fully converged network for voice, video and a data traffic, and is responsive to meeting research needs of the University.
- Move University IT planning and resource allocation from a capital intensive process to an operational service organization by managing IT services, not core to the University mission, off premise and redirect on-premise resources to support the goals of the mission, achieved through a comprehensive cloud strategy.
- Ensure all online content and functionality is accessible or has processes in place to provide accommodations.
- Manage prudent use of the Student Technology Fee funds to provide quality IT services to all students.



Nevada State College

Strategic Objectives

Nevada State College (NSC) is dedicated to providing high-quality educational opportunities through baccalaureate and targeted Masters programs that open the door to career success and an enhanced quality of life for a promising population of students, including many from first-generation and historically under-served backgrounds. To this end, the College emphasizes superb instruction, excellent academic programs, exemplary student support, and innovation as a means to more efficient, effective outcomes in all corners of the campus. Ultimately, the college aspires to promote the educational, social, cultural, economic, and civic well-being of both the citizens and State of Nevada.

The college strives to fulfill its mission by maximizing the quality and accessibility of a baccalaureate and Masters education. To address the former, NSC offers a learning experience characterized by personal attention, advanced technology, and exceptional teaching practices. To address the latter, NSC strives to maintain a comparatively low cost of education while meeting the diverse needs of our student population through student-centered degree pathways, robust academic support, and engaging student life opportunities.

The following strategic objectives guide the pursuit and implementation of mission-specific goals for 2019-2023:

1. Increase student retention, degree completion, and overall academic success, particularly among first-generation, under-represented students by improving comprehensive academic resources, first-year experience and summer bridge initiatives, academic support programs, peer support initiatives, and overall student quality of life.
2. Expand the enrollment of students from targeted populations through strategic, evidence-based recruitment and marketing, as well as enhanced relationships with all relevant communities, including area high schools and NSHE's two-year colleges.
3. Increase the activities, resources, and physical space needed to foster a more engaging student and residential life experience on campus.
4. Continue to develop and enhance academic programs that offer distinctive, high-quality learning experiences to students.

5. Continue to build the campus data infrastructure to enhance our reliance on assessment and evidence to drive institutional improvement, enhancements in customer service, and innovation.
6. Expand our efforts to integrate technology into our processes to enhance quality and maximize efficiency, particularly for underlying structures that support student success (e.g., degree pathways, E-Alerts) and institutional business processes.
7. Continue to develop innovative partnerships between academic and student affairs that facilitate student-centered practices and provide students with the integrated, structured support needed to achieve their goals and meet our expectations.
8. Introduce dependable and data-driven degree pathways that help facilitate the timely progression of students from the first day of enrollment – including that which occurs at community colleges – to the attainment of a degree at NSC.
9. In accordance with our statewide mission, establish strong partnerships and articulation agreements with incentives for students who have earned an associate’s degree.
10. Maintain affordability and administrative efficiency to ensure that students are able to afford a high-quality college degree from NSC.
11. Expand extramural funding to support the success of first-generation and under-represented students, enhance degree programs, and facilitate greater experiential/research opportunities.
12. Redesign remedial placement practices and associated gateway courses to facilitate student skill-acquisition while simultaneously decreasing costs and time to completion.
13. Prepare students to serve and lead Nevada’s workforce by fostering essential knowledge and skills through exemplary instructional practices, cutting-edge technology, research or project-based curricula, and enhanced faculty and staff development initiatives.
14. Create and strengthen partnerships that provide a synergistic and interdependent relationship with the Southern Nevada community, particularly in the creation of a workforce-centered internship program and the development of public-private ventures that leverage the usage of our land.
15. Foster, model and disseminate institutional best practices that contribute to a broader understanding of teaching excellence and student success in higher education, particularly in support of historically under-served student populations (e.g., first-generation students).
16. Enhance our Hispanic Serving Institution status (HSI) by cultivating the learning experiences, support structures, and resources to promote student success.

Academic Programs

Beginning from a commitment to our mission and core values, and guided by data on career prospects, educational market saturation, and student interest, NSC has prioritized the introduction of the following new academic programs and initiatives over the next four years. A commitment to the quality and health of existing programs, in accordance with projected resources, as well as strategic planning for the future of the institution strongly influenced the selection of new programs and initiatives.

New Program Name/Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Funds
Early Childhood Education	An inclusive BAED degree that qualifies graduates for dual licensure in Early Childhood Education and Early Childhood Developmentally Delayed Education	Fall 2020	Fiscal Year Strategic Initiative Funding Request was for \$80,883	Private donors have expressed interest in supporting an early childhood center on our NSC campus. Early Childhood Center in new (proposed) SoE Building.
Secondary Education Dual Programs, BA degrees in STEM majors	The School of Education is collaborating with the School of Liberal Arts and Sciences to create programming that allows students to earn dual a secondary education degree and a content degree (potentially a new BA degree in the STEM disciplines). The SoE will confirm/create Dual Programs in Math/Math Education and Biology/Biology Education	Create dual programs in Math/Math Education and Biology/Biology education for Fall 2019	NSC, with UNR and UNLV, has proposed a FY Strategic Initiative Funding for a statewide program like "UTeach." No funds requested	TBD. The potential for outside funding is being explored
English Language Acquisition and Development (ELAD)	The SOE is looking to significantly increase enrollment in undergraduate and/or post-baccalaureate level coursework that leads to teaching candidates or currently practicing K-12 teachers meeting the requirements for the NDE ELAD endorsement	This initiative will support NSC's efforts to add a new NDE ELAD endorsement. A potential implementation date is Fall 2020	A new faculty member was hired for ELAD in Fall 2017. No additional cost projected for the coming academic year.	TBD
BS in Chemistry	Pursuing an American Chemistry Society certified Chemistry BS	Fall 2020	\$100,000 one-time for equipment; \$25,000/year equipment maintenance	None
BS in Health Sciences	This degree provides an alternative 4-year degree pathway for pre-nursing and other students for careers in the health sciences outside of nursing	Fall 2020	Two 9-month tenure track lines and one 12-month lecturer: \$275,000 + fringe	None
BA Public Policy or Public Administration	Programming in public administration, leadership or service	Fall 2021	\$250,000	Private donors have expressed interest in supporting this program at NSC

New Program Name/Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Funds
BA in Sociology	The Las Vegas Valley is a rapidly changing and unique metropolitan area. The creation of a major in Sociology will better able NSC to help our students make sense of the world around them and their place in it. SOC B.A. would also serve to complement NSC's robust Psychology program and newly created Communication major	Fall 2021	One new tenure-track faculty hire \$65,000 + fringe	TBD. The potential for outside funding is being explored
BS in Data Informatics	The BS in Data Informatics immerses students in the ways data and technology are informing revolutionary changes in the understanding and resolution of complex societal issues. The interdisciplinary program will have three tracks that mirror the highest demands in the workforce: Bio-informatics, Health informatics, and Business informatics	Fall 2021	Two tenure track faculty \$82,000 + fringe per faculty One lecturer \$58,000 + fringe	No outside funding at this point, but grants/donations will be pursued
Master's in Nursing: Generalist with specialty tracks that meet market demands	There is increased demand for nurses with an advanced education to meet the needs of hospitals, clinics, and other healthcare settings throughout the state. A generalist approach allows students to complete an MSN with specialty tracks that meet market demands	Fall 2020	Three new nursing faculty (doctoral Prepared/tenure track) \$100,000 + fringe per faculty	TBD. The potential for outside funding is being explored
BS in Computer Sciences	This program will provide students with software development and programming skills, while preparing them for a host of promising career opportunities in Nevada, including occupations as software application developers and computer systems analysts	Fall 2022	One tenure track faculty \$82,000 + fringe One lecturer \$58,000 + fringe	No outside funding at this point, but grants/donations will be pursued

Student Services

During the next four years (2019-2023), Nevada State College will expand upon and/or introduce the following student service initiatives.

Brief Description of New/ Expanding Student Services	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
<p><i>Expanded Student Life & Residential Experience</i></p> <p>Dramatically increase the scope of student life experiences at NSC while maintaining a commitment to personal development and academic integration. New personnel include a Director of Wellness, a Compliance Officer, a Student Life Manager, and an Administrative Assistant.</p>	2019-2023	<p>Operating costs of approximately \$50,000</p> <p>Hire a Director of Wellness, Compliance Officer, Manager of Student Life, and Administrative Assistant \$298,000 + fringe</p>	Options are being explored with College Advancement
<p><i>Peer Leadership Program</i></p> <p>Implement a peer leadership program that develops campus leaders and provides mentorship to student cohorts from their initial enrollment at NSC to degree attainment; expense covers operating costs and student wages.</p>	2019-2021	\$50,000	Student fees

Brief Description of New/ Expanding Student Services	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
<p><i>Complete College America Pathways Project</i> Participate in Complete College America Metro Pathways Project to develop guided pathways to baccalaureate degree attainment for first-time NSC freshman and CSN transfers; expense covers operating costs and stipends.</p>	2019-2020	\$15,000	Student fees
<p><i>Comprehensive Advising & Mentorship</i> Implement comprehensive 4-year student advising that eschews our 0-60 credit advising model and provides students with professional advising at the Academic Advising Center from 0 credits to degree completion. Complement this effort with faculty mentorship that also runs from the freshman year to graduation. Expense covers three new advisors.</p>	2020	Three new advisors \$40,000 + fringe per advisor	Student fees
<p><i>Enhanced New Student Orientation</i> Implement robust Student Orientation Week for first-time freshman that improves students' preparation and community engagement; expense covers operating costs.</p>	2019	\$50,000	Orientation fee
<p><i>Expand Instructional Technology Support</i> Increase ability to provide development opportunities to instructors and support for strategic curricular initiatives (e.g., improved online infrastructure and instruction); expense covers one new instructional technologist.</p>	2019	\$80,000	None
<p><i>Outcomes Assessment & Core Curriculum Support</i> Strengthen outcomes assessment process, improve implementation of recommendations, and work with faculty/deans to establish greater quality and consistency in the core curriculum; expense covers CTLE position.</p>	2020	\$65,000	None
<p><i>Student Services Platform</i> Secure advising software that will direct students along ideal degree-completion pathways with prescribed curricular sequences, facilitate a robust E-Alert system, and support effective case management.</p>	2019	\$100,000*	Student fees
<p><i>Increased utilization of academic support</i> Increase utilization of academic support in advising, the Writing Center, and the Academic Success Center, particularly in the freshman year; expand virtual and on-demand academic assistance opportunities.</p>	2019-2023	\$75,000*	None
<p><i>Expanded Student Wellness Support</i> Expand on-site student counseling to include at least one additional day of service each week.</p>	2019-2020	\$24,000	None

* Requested funding is not final and awaits further review

Brief Description of New/ Expanding Student Services	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
<p><i>First-Year Experience</i></p> <p>Continue to develop an engaging first-year experience that promotes student retention and long-term academic success; expense covers three additional FYE lecturers.</p>	2019-2022	Three lecturers \$42,000 + fringe per lecturer	None
<p><i>TRiO Student Support Services</i></p> <p>Renew our TRiO-SSS grant in 2020 when the current grant expires to continue promoting high retention/graduation rates among low-income, first-generation students.</p>	2020-21	\$225,000	Federal grant (TRiO SSS)
<p><i>International Program Development</i></p> <p>Develop capacity to implement and maintain international programs; expense covers registrar staff with specialization in this area.</p>	2020	\$40,000 + fringe	None
<p>Secure funding and develop programming to increase STEM teachers in Nevada.</p>	2019-2020	\$200,000	Federal grant funding (Noyce, NSF)
<p><i>Career Services Center</i></p> <p>Support career services center to engage students in more community opportunities and internships.</p>	2019-2023	\$55,000	Student fees
<p>Expand Teacher Academies in the High Schools through dual credit offerings to address Nevada's teacher shortage and create a pipeline for high performing secondary students to enroll in NSC's School of Education and enter teaching careers.</p>	2019-2023	\$80,000	Private funding
<p>Daycare</p>	2020-2021	\$300-600,000*	Private funding
<p>Structure courses and curricula to imbue students with functional and marketable skills that promote opportunities for career, graduate school, and personal success.</p>	2020	\$48,000 (Summer Institute for faculty)	Private funding

* Requested funding is not final and awaits further review



College of Southern Nevada

Strategic Objectives

CSN Mission Statement

The College of Southern Nevada creates opportunities and enriches lives with inclusive learning and working environments that support diversity and student success. The College fosters economic development, civic engagement, and cultural and scientific literacy, while helping students achieve their educational, professional, and personal goals.

Our Mission Statement responds to changes in the community environment by focusing on learning outcome achievement and successful degree completion. CSN intends on presenting our new 2017-2024 Strategic Plan to the NSHE Board of Regents this upcoming academic year. The College of Southern Nevada generates evidence for the *NSHE Strategic Plan* goal fulfillment by conducting and measuring the following supportive strategies:

NSHE Goal: ACCESS

Metric: Increase participation in post-secondary education.

CSN Strategies: Increase dual and concurrent enrollment opportunities for current high school students. Increase awareness and student participation of the Nevada Promise program. Provide more access to a higher education to the Southern Nevada prison population. Structure college life to fit the needs of returning adults through such tactics as block scheduling, accelerated programming, weekend college, and comprehensive online education programming.

Indicators: Measure student enrollment growth in dual and concurrent enrollment programs, Nevada Promise program and the prison education program. Measure enrollment growth in online courses and programs. Measure participation in block schedules, accelerated programming, and weekend college.

NSHE Goal: SUCCESS

Metric: Increase student success

CSN Strategy: Increase student completion of degrees and certificates and increase transfer rates through the development and implementation of a comprehensive *Guided Pathways for Student Success* approach for all degree and certificate seeking students that includes: 1.) An intentional degree

declaration process with early career exploration for students to get on a formalized pathway 2.) Robust new student onboarding experience with proactive advising and orientation 3.) Term-by-term academic mapping for every academic program focused on timely completion 4.) Completion of Gateway Math and English within the first year and 5.) Transfer and articulation pathways for all students intending to transfer to another NSHE institution.

CSN Indicators: Early *leading* indicators include the percentage of students who attempted 15/30 credits in one term/year, the percentage of students who pass college level English and math in one year, the percentage of students who pass at least 9 college credits in the student’s field of study in year one, the percentage of students who persist from term one to term two and year one to year two, the total college credits attempted and the total college credits completed by students each semester and each year, and the course pass rates at a grade of C- or better. *Lagging* indicators include degree and certificate completion rates as well as transfer rates. Each of these *leading* and *lagging* indicators will be disaggregated by ethnicity, socioeconomic status, gender and age.

NSHE Goal: CLOSE THE ACHIEVEMENT GAP

Metric: Close the achievement gap among underserved populations

CSN Strategy: Develop and implement best practice programming that aims to decrease and close achievement gaps among underserved populations to include scaling up mentoring programs, increasing the student case management approach through predictive analytics and increasing professional development programming for faculty and staff.

CSN Indicators: Measure and disaggregate student success indicators for students who participate in mentoring programs, First Steps, and other College initiatives that aim to close achievement gaps. Measure the participation and outcomes of professional development programming in this area.

NSHE Goal: WORKFORCE

Metric: Collaboratively address the challenges of the workforce and industry education needs of Nevada

CSN Strategy: Focus on meeting the needs of CSN’s service areas for in-demand industry sectors by aligning program offerings and pathways to workforce needs in the region.

CSN Indicator: Conduct regular environmental scans of the regional workforce needs and measure the alignment of credit and non-credit programming to these workforce industries. Deploy regular surveys to workforce partners to determine how well CSN is preparing students for the workforce for each of the in-demand industry sectors.

NSHE Goal: RESEARCH

Metric: Co-develop solutions to the critical issues facing 21st century Nevada and raise the overall research profile

CSN Strategy: Provide quality evidence-based professional development and undergraduate research programs.

CSN Indicators: Analyze and share survey results for the CSN community members who participated in research grants. Analyze and share outcomes/results associated with research grants that were awarded each year.

Academic Programs

This academic master plan supports the core themes of student success, community and connection, quality, and institutional stewardship.

New Program Name/ Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Funds
Computer Science – Associate of Science (AS)	<p>Focuses on computer theory, computing problems and solutions, and the design of computer systems and user interfaces from a scientific perspective. Includes instruction in the principles of computational science, computer development and programming, and applications to a variety of end-use situations.</p> <p>This program is intended as a transfer degree for entry into the universities' Bachelor of Science degree in Computer Science.</p>	Fall 2019	<p>Negligible. All coursework to present this program currently exists in the CSN catalog. CS, CPE, and IS courses will be employed.</p> <p>Current facilities and equipment will suffice for this program.</p>	None
Graphic Communication- Industrial Design – Associate of Applied Science (AAS)	<p>Prepares individuals to use artistic techniques to effectively communicate ideas and information to business and consumer audiences via the creation of effective forms, shapes, and packaging for manufactured products. Includes instruction in designing in a wide variety of plastic and digital media, prototype construction, design development and refinement, principles of cost saving, and product structure and performance criteria relevant to aesthetic design parameters.</p> <p>No similar programs exist in NSHE. Is an ideal feeder program for the CSN BAS in Project Management.</p>	Fall 2019	<p>Negligible. Almost all coursework to present this program currently exists in the CSN catalog. GRC, MT, and ET courses will be employed.</p> <p>Current studio facilities and equipment will suffice for this program.</p>	None
Engineering Tech- Avionics – Associate of Applied Science (AAS)	<p>Prepares individuals to apply technical knowledge and skills to repair, service, and maintain all types of aircraft operating, control, and electronic systems. Includes instruction in flight instrumentation, aircraft communications and homing systems, radar and other sensory systems, navigation aids, and specialized systems for various types of civilian and military aircraft.</p> <p>This program addresses a direct industry need not currently available at any other NSHE institution.</p>	Fall 2019	<p>Almost all coursework to present this program currently exists in the CSN catalog. ET, AV, and other current courses will be employed. Estimated that two courses in aircraft instrumentation may need to be developed with purchase of trainer/simulators.</p> <p>Current classroom facilities and equipment will suffice for most of this program.</p>	None

New Program Name/ Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Funds
CIT- Cybersecurity Compliance – Associate of Applied Science (AAS)	<p>Prepares individuals to assess the security needs of computer and network systems, recommend safeguard solutions, and manage the implementation and maintenance of security devices, systems, and procedures. Includes instruction in computer architecture, programming, and systems analysis; networking; telecommunications; cryptography; security system design; applicable law and regulations; risk assessment and policy analysis; contingency planning; user access issues; investigation techniques; and troubleshooting.</p> <p>This program addresses a direct industry need not currently available at any other NSHE institution.</p>	Fall 2019	<p>Negligible. Almost all coursework to present this program currently exists in the CSN catalog. CIT, Cisco, CSEC, and other current courses will be employed.</p> <p>Current classroom facilities and equipment will suffice for most of this program.</p>	None
Construction Management -Building Inspection – Associate of Applied Science (AAS)	<p>Prepares individuals to apply industrial, labor, and governmental standards and laws to the oversight of construction projects and the maintenance of completed buildings and other structures. Includes instruction in construction processes and techniques, materials analysis, occupational safety and health, industry standards, building codes and specifications, blueprint interpretation, testing equipment and procedures, communication skills, accident investigation, and documentation.</p> <p>This program addresses a direct industry need currently under discussion at NSHE.</p>	Fall 2019	<p>Negligible. Almost all coursework to present this program currently exists in the CSN catalog. CONS, BI, and other current courses will be employed.</p> <p>Current classroom facilities and equipment will suffice for this program.</p>	None
Construction Estimating – Certificate of Achievement	<p>Prepares individuals to apply technical knowledge and skills to residential and commercial building construction and remodeling. Includes instruction in construction equipment and safety; site preparation and layout; construction estimating; blueprint reading; building codes; framing; masonry; heating, ventilation, and air conditioning; electrical and mechanical systems; interior and exterior finishing; and plumbing.</p> <p>This program addresses a direct local construction industry need not currently available at any other NSHE institution.</p>	Fall 2019	<p>Negligible. Much of the coursework to present this program currently exists in the CSN catalog. CONS, BI, and other current courses will be employed.</p> <p>Current classroom facilities and equipment will suffice for this program.</p>	None
Motorsport Technology – Certificate of Achievement	<p>Prepares individuals to apply technical knowledge and skills to repair, service, and maintain motorcycles and other similar powered vehicles. Includes instruction in lubrication and cooling systems, electrical and ignition systems, transmissions, fuel systems and adjustments of moving parts.</p> <p>This program addresses a direct local business need not currently available at any other NSHE institution.</p>	Fall 2019	<p>Much of the coursework exists. AUTO and current courses will be employed. Estimated that some specific courses may need to be developed with purchase of trainer/simulators.</p> <p>Current classroom facilities and equipment will suffice for most of this program.</p>	None

New Program Name/ Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Funds
Culinary Arts – Bachelor of Applied Science (BAS)	<p>Builds upon the Associate of Applied Science (A.A.S.) in Culinary Arts. It will broaden the education with advanced culinary techniques, and business and management courses, for full-service careers in today's food service and hospitality industries. Individuals will learn the skill sets necessary to work in and operate culinary facilities. While a passion for the art of cooking is important, good management and interpersonal skills are essential.</p> <p>The B.A.S. in Culinary Arts will become the continuation of the A.A.S. degree in Culinary Arts currently being offered here at CSN and at any of the ACF accredited A.A.S. programs in the United States. In addition, this is also an incentive for local students enrolled in the CTE College Credit programs at the Technical High Schools around the Valley to continue their education with CSN. In addition TMCC offers as AAS Degree in Culinary Arts that will feed directly into this program.</p>	Fall 2020	This program can be fitted into the existing facilities with utilization of additional night time and weekend offerings for all levels of students. We currently offer both of these times to our A.A.S students and have found them to be successful.	None
Criminal Justice – Bachelor of Applied Science (BAS)	<p>Program will have three areas of emphasis to meet the needs of current college students and current Criminal Justice professionals. The three areas of emphasis are Criminal Justice, Law Enforcement Management, and Emergency Management. Each emphasis area provides educational opportunities that foster economic development, civic engagement, and cultural literacy while helping students achieve their educational, professional, and personal goals.</p> <p>The target student population would be CSN's AA and AAS Criminal Justice major students who wish to pursue a BAS Degree in Criminal Justice, current law enforcement professionals in southern Nevada or elsewhere who need or will need a Bachelor's Degree for promotional consideration. Additionally, the Henderson Police Department, for example, has changed hiring requirements effective in two years to require Bachelor's degrees for all new hires. Supervisory officers have seven year in which to obtain a Bachelor's degree.</p> <p>This degree would be the only BAS degree in Southern Nevada after NSC phases out their program. Unlike either NSC or UNLV, this degree has unique emphasis areas. The Emergency Management emphasis could provide a collaborative opportunity with UNLV's Master's Degree in Emergency Management.</p>	Fall 2020	The program currently has six full time and approximately 30 part time instructors who are qualified to teach these courses. With additional course offerings, at least two full time faculty members and multiple part timers would be needed to cover the course schedule. Facilities already exist; in fact, there is classroom space at the 311 Water Street facility. Additionally, all courses could be taught in an online format.	None

New Program Name/ Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Funds
Food Service Operations – Bachelor of Applied Science (BAS)	<p>Provides students interested in entering the food service industry a unique set of skills and knowledge. This BAS degree is designed to focus on the practical skills, soft skills, leadership skills and critical thinking skills used by successful food service supervisors and middle managers. Focusing on the applied nature of this degree, faculty will provide students with a rigorous, active learning environment that presents real workplace problems inside of the classroom. Students will complete a food service operations internship relevant to a specific area of interest.</p> <p>In addition, this degree aligns with the Food and Beverage Management AAS degree by allowing for seamless articulation for current CSN students.</p> <p>The outlook for growth in the demand for Food Service Managers in Nevada is double the expected demand nationwide.</p>	Fall 2020	<p>Existing funds for the Food and Beverage Program will be reallocated for this program.</p> <p>An increase in the State budget allotment for the Food and Beverage Program may be necessary to cover the cost of cloud-based software programs due to the fact that software as a service (SaaS).</p> <p>An additional increase in the State budget allotment for the Food and Beverage Program will be needed for an additional adjunct faculty member in year three and a second additional adjunct faculty member in year five.</p>	Perkins grant for Equipment

Tourism, Convention and Event Planning – Bachelor of Applied Science (BAS)	<p>A practical, application-oriented degree which will cover the economic, social and commercial philosophies of tourism, convention and event planning, while giving students an opportunity to learn from industry professionals.</p> <p>The degree is designed to focus on practical, soft, leadership, critical thinking, as well as communication and management skills. Seasoned industry professionals with academic credentials will provide students with real world knowledge and scenarios.</p> <p>In addition to the current long-standing (20 years) internship for the current AAS Degree, there will be an additional field experience course.</p>	Fall 2020	<p>There are really no major expenses associated with offering this Degree.</p> <p>EXISTING FACILITIES: No special requirement, modifications, equipment needed. New BAS Degree can operate with existing facilities without a negative effect on present programs.</p> <p>NO New additional facility will be required.</p> <p>Currently all software used has been donated by the vendors: We may need financial support for cloud-based software.</p>	None
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New Program Name/ Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Funds
Healthcare and Human Services Management – Bachelor of Science (BS)	<p>Program is designed to develop healthcare and social service skills so that graduates can successfully address the changing needs of increasingly diverse communities. The curriculum focuses on areas related to healthcare, social work, and organizational leadership, including health and human services, public administration, child welfare, gerontology, economics, psychology, healthcare statistics and communication. Graduates will be prepared to plan and promote, plan, effective service delivery and program management, with increased attention to planning and governance.</p> <p>There is currently no similar program of this type offered at the bachelor degree level. CCSD has 3 high schools with community health programs and UNLV, Touro, and UNR offer master degrees public health or healthcare administration. This program would serve as a pathway or bridge between CCSD's high school community health programs and NSHE university's master's degree in public health or healthcare administration.</p>	Fall 2020	<p>Two full-time faculties will be necessary to deliver the curriculum for the HSHM Program. Both faculties will be responsible for delivering the course curriculum.</p> <p>Beyond the initial start-up costs, sufficient revenue should be generated from tuition and other fees to support the resource needs of the program.</p>	None
Funeral Service and Mortuary Science – Associate of Applied Science (AAS)	<p>Program addresses many of the components of CSN's mission statement, and conforms to the mission by providing workers with the technical skills needed to compete and succeed in today's industrial workforce. This new degree would offer academic and vocational instruction in FSMS to students, as well as bring expanded employment opportunities to Southern Nevada and throughout the state in the funeral service industry.</p> <p>CSN is not duplicating any NSHE program. There are currently no FSMS Programs offered at any of our NSHE Institutions. Nor are there any such programs offered at any of Nevada's private, for-profit higher education institutions. The closest FSMS programs are in California, Arizona and Utah.</p>	Fall 2020	<p>Two Faculties will be necessary to deliver the curriculum for the FSMS Program. One faculty will be identified at the program director, and the other will serve as the clinical coordinator. Both faculties will be responsible for delivering the curriculum.</p> <p>Beyond the initial start-up costs, sufficient revenue should be generated from tuition and other fees to support the resource needs of the program.</p>	<p>Individuals from local funeral homes and crematoriums are willing to provide support through offering their facilities as clinical sites and preceptors for training purposes, service on the advisory committee for the Mortuary Science Program, as well as course instruction, assistance with accreditation through the American Board of Funeral Service Education, and contacts with which to obtain supplies from national funeral service vendors.</p>
Welding – SMAW Skills Certificate	Shielded Metal Arc Welding processes consistent with American Welding Society certificate standards	Fall 2019	Current equipment, facilities, and faculty are sufficient to establish this program	None
Welding – GMAW Skills Certificate	Gas Metal Arc Welding processes consistent with American Welding Society certificate standards	Fall 2019	Current equipment, facilities and faculty are sufficient to start program	None

New Program Name/ Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Funds
Welding – GTAW Skills Certificate	Gas Tungsten Arc Welding processes consistent with American Welding Society certificate standards	Fall 2019	Current equipment, facilities, and faculty are sufficient to establish this program	None
Welding – Structural Skills Certificate	Flux Core/Structural Welding processes consistent with American Welding Society certificate standards	Fall 2019	Current equipment, facilities, and faculty are sufficient to establish this program	None
Sports and Athletic Management – Associate of Science (AS)	Program designed to prepare students for certification as an athletic trainer or athletic manager	Fall 2020	<p>\$50,000 for startup equipment. Program will use selected adjunct staff.</p> <p>Part-time faculty to teach 3 sections per semester: $(\\$825/\text{IU} \times 3 \text{ IU/semester} \times 2 \text{ semesters}) = \\$4,950.00 \times 3 \text{ sections} = \\$14,850$</p> <p>Total per year: \$14,850</p>	Perkins grant for Equipment
Sports and Athletic Management – Skills Certificate	12-credit certificate designed to provide students with initial certification for coaching and officiating	Fall 2020	Utilize existing full-time and adjunct coaching and training staff in alignment with AS Degree	\$0, assuming AS is approved
Project Management – Skills Certificate	Aligned with Project Management Institute Certification. Provides knowledge and skills in project management, including fundamentals as well as scheduling software, procurements and contracts, managing human resources and risk management.	Fall 2019	Negligible. Current equipment and faculty are sufficient to establish the program.	Collaborations with current Business and Industry partners.
Environmental Management – Bachelor of Applied Science (BAS)	Focuses on management skills within the field of environmental consulting. Instills skills, abilities and competence in support of the environmental consulting and management industries within Nevada. Graduates will be prepared to enter the workforce.	Fall 2020	<p>Current equipment is sufficient to establish the program. Current full-time instructors are qualified to teach upper-division coursework. One or more qualified part-time instructors would be hired for selected courses and come from industry.</p> <p>Estimate maximum of 5 upper-division classes taught by part-time faculty per semester. Full-time faculty can teach upper-division courses as overload. Each 3-credit upper division class is taught at 1.25 IU/credit.</p> <p>Up to 15 credits/semester x 1.25 IU/credit x \$825/IU x 2 semesters = \$18,562.50</p> <p>Total per year (maximum): \$30,937.50</p>	NV Workforce STEM Grant could be used to purchase additional equipment. However, this grant is not required.

New Program Name/ Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Funds
Retail Management – Skills Certificate	Aligns with Western Alliance of Food Chains and has been a result of direct input and support by the WAFC Advisory Board.	Fall 2019	This program is a result of a credit adjustment to the existing Certificate of Achievement in Retail Management.	None
Human Resource Management – Skills Certificate	Will be developed in collaboration with NV Society of Human Resource Management to prepare completers with the preparation for the SHRM Certification Exam.	Fall 2019	Negligible.	Collaborations with Business and Industry partners.
Geographic Information Systems – Certificate of Achievement	Interdisciplinary program between environmental science, geography, geology, biology, and computer information technology	Fall 2020	Negligible. Faculty, equipment, courses currently exist.	None
Financial Economics – Skills Certificate	Preparation of students to complete Life, Health and Annuities certification exams.	Fall 2019	Projected need of \$10,000	Local financial services firms
Aviation Cabin Service – Associate of Applied Science (AAS)	Contributes to the agreement with Hanseo University for preparing cabin service personnel	Fall 2019	Negligible.	
Pre-Pharmacy – Associate of Science (AS)	New transfer degree meets the need for additional pharmacists in Nevada. Will collaborate with Rosemany and/or UNR to develop a pre-Pharm track so students can complete prerequisites efficiently, Earn a pharmacy technician credential. An opportunity to pilot a competency based education model.	Fall 2020	\$150,000 – Potential re-use of space and equipment from the previous Pharmacy Tech program.	Seek support from grants, corporations, collaborations with business/industry.
Logistics Management – Bachelor of Applied Science (BAS)	Focuses on project management skills within the field of logistics.	Fall 2020	\$95,000 – New faculty – Primarily online delivery. Current equipment and facilities are sufficient to establish this program.	
*Dental Science (AS)	A transferable degree to prepare students for application to CSN's BS Dental Hygiene program.	Fall 2020	Current equipment, facilities, and faculty are sufficient to establish this program.	

Student Affairs

The Student Affairs Division within CSN plans to support current and future academic programs through existing and expanded student service support programs.

Brief Description of New/ Expanding Student Services	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Funds
Degree Planner Implementation	Degree Planner implementation kicked-off on September 6, 2018. Degree Planner is the academic planning module of the Starfish platform, that provides students with a proactive, personalized, step-by-step roadmap to graduation, even as their goals and circumstances change.	Fall 2019 and ongoing	Unknown	None
Upgrade of Starfish	CSN will implement new features of Hobsons Starfish such as predictive analytics, more robust career assessment and exploration tools, retention scores, and strategic consulting upgrade to enhance the functionality and usage of Starfish.	Signed contract due to Hobsons by Friday, September 28, 2018	\$128,208 – per year for 5 years	None
The new Counseling and Advising Model	Counseling and Advising on the NLV Campus has been combined under one AVP for the purpose of better serving students in one location. Going forward this model will be developed on HEN and WCH campuses.	NLV May 2018 WCH and HEN by summer of 2020	Personnel, facilities, and equipment - approximately \$500,000 per campus	Excess Credit Fee
Incorporating the utilization of data into improving communications and outputs in the student pipeline	Use of Radius Student Relationship Management (CRM) to make purposeful connections at each stage of the student's lifecycle. Through the use of a personalized student portals, multichannel communications plans (email marketing, live chat, text messaging) the platform improves prospect and enrolled student engagement with the college.	Fall 2018	\$250,000	None
Foster Care Initiative	Increase accessibility to reduce barriers for foster youth. The Division of Student Affairs will continue/begin access, persistence, and success effort to meet the needs of this group.	Spring 2019	\$95,000	None
Secure funding and develop criteria for Emergency Loan/Grant Program	Provide funding to students in dire need for basic essentials while attending college	Fall 2019	\$79,000	None

Brief Description of New/ Expanding Student Services	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Funds
Provide evidence based programing to improve student success	Hired assessment senior specialist to coordinate all assessment activities throughout the student affairs division to align institutional strategic plan with divisional goals and programming	Spring 2018	\$60,000	None
Scale up new student onboarding experience	Onboarding process required for all new students, which includes advising, orientation, testing, and onboarding.	Fall 2020		None
First year experience to identify intentional activities that seek to engage and retain students	Hire new director for first year experience and student success initiatives	Spring 2019	\$97,000	Excess Credit Fee
	Implementing a new online orientation software.	Fall 2019	\$60,000	
Refining the campus policing policy to enhance collaboration with southern schools	The Division of Student Affairs will continue to collaborate with CSN Campus Police Department to the local College's security and safety policy. Campus Police will also collaborate with local and regional partners to achieve the goals of a potential southern command.	Ongoing	Unknown	None
Improving the advisor/student ratio by increasing of numbers of academic advisors 27 to 35	Current ratio is 1:1300. Implementing strategies to target special populations of students based on credit hours earned, full-time part-time status, probation, degree seeking.	Fall 2018 and ongoing	\$360,000	% Excess Credit Fee and attrition of positions
Automation of transfer credit evaluation and degree/ graduation audit processing	Expedite and maximize the transcript capture process for transfer evaluations through the implementation of automation rules for course articulated from major feeder institutions	January 1, 2019	\$8,000	None



Great Basin College

Introduction

Great Basin Colleges' Academic Plan identifies two-year program goals and associated expenses. The College opted to develop a plan which focuses on completion of goals and objectives described in the 2015-2019 academic plan. The goals identified herein are aligned with GBCs institutional priorities and are considered critical for future sustainability.

Strategic Objectives

Great Basin College presented its 2014-2021 Strategic Plan to the NSHE Board of Regents at its meeting on June 5-6, 2014. The Strategic Plan presented the GBC vision for economic sustainability through future growth, as administered through its mission and core themes. The 2019-2021 Academic Master Plan presented here continues the planning trajectory set in the previous plan and includes an updated focus on academic programs and student services derived from the approved long-term institutional strategy.

GBC Mission Statement

Great Basin College enriches people's lives by providing student-centered, post-secondary education to rural Nevada. Educational, cultural, and related economic needs of the multicounty service area are met through programs of university transfer, applied science and technology, business and industry partnerships, developmental education, community service, and student support services in conjunction with certificates and associate and select baccalaureate degrees.

Core Themes

- Provide Student Enrichment
- Build Bridges and Create Partnerships
- Serve Rural Nevada

GBC Vision

While maintaining the strength of its community college mission, Great Basin College will remain an economically sustainable institution through growth, by increasing enrollment, expanding its service area, offering more ladder'd bachelor's degrees and becoming nationally known for its innovative distance delivery systems, all leading it to be recognized as an indispensable and evolving provider of post-secondary education in rural Nevada.

The vision of programs and services identified in this plan fulfill GBC mission and core themes. Importantly, they address the educational and training needs of rural Nevada and fulfill the NSHE agenda of creating a more educated public and skilled workforce.

Academic Programs

The former 2015-2019 Academic Master Plan highlighted the need for expansion of existing programs, particularly of technical programs. The new 2019-2021 plan highlights the need for efficiencies by building on opportunities to align and expand existing programs. Enrollment capacity within existing courses will be used to create parallel programs with significant overlap of courses, but which address different community needs. The additional cost for adding these programs will be minimal while adding increased value to current educational opportunities.

NOTE: Planning identified below supports GBCs Mission, Vision and Core Themes.

New Programs Name/Expansion of Existing Programs	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Funds
Continually evaluate the changing needs for new and existing programs	GBC’s mission is to respond in a timely manner to the needs of the constituents of the GBC service area	2019-2021	As needed and can be afforded	Grants and private funding are always sought where and when possible
Expand and maintain mine and industry workforce training programs	Continue to evaluate opportunities for expanding contract training programs with mining companies and other businesses and industries	2019-2021	Minimal, mostly related to facilities; staff is in place	Largely self-funded through contract agreements
Expand the types and numbers of skills certificates granted (<30 credits)	Continually seek opportunities to develop certificates with employability value	2019-2021	Minimal, utilizing existing courses and instruction	Some may be offered through contract instruction
Evaluate and develop opportunities to provide programs fully available online	Distance delivery through the online system remains a key strategy to offer more student opportunities in a region of widely dispersed and limited population	2019-2021	Base costs covered with existing infrastructure; other costs through student fees (\$10,000/yr additional)	Student fees charged for online courses cover expanded online delivery
Engage high schools within the service area for dual enrollment educational opportunities	The two foci are to address college readiness of graduating seniors and to offer dual credit and similar opportunities to prepared students	2019-2021	Minimal new cost, primarily administrative	
Evaluate success rates in developmental education courses	Continue working on strategies to increase incoming college readiness and timely remediation of those not prepared	2019-2021	Minimal new cost, primarily administrative	
Transition AAS EMT-Paramedic into BAS program	GBC currently offers EMT - Paramedic courses for AAS degrees only; this will expand the program and address a critical rural healthcare need	2020	One additional part-time instructor at \$9,600/year.	Grand funding will be sought to start the addition. Then transition EMS/Paramedic programs to Differential fees.

New Programs Name/Expansion of Existing Programs	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Funds
Transition AAS Digital Medical Imaging (Sonography) into BS program	GBC currently offers Sonography courses for AAS degrees only; this will expand the program and address a critical rural healthcare need	2020	One additional part-time faculty instructor at \$9,600/year.	Radiology differential fees.
Transition AAS nursing program to a 2-plus program track to BSN	With current trends in Nursing, the ADN program will be discontinued and the RN-to-BSN program will become a freshman admission BSN program	2020	No new cost, only conversion of the format of the existing program	Grant funding will be sought to support the transition
BAS Engineering Technology	Having 5 strong AAS degrees in high demand technical fields has warranted an avenue for graduates to pursue a technical level engineering degree	2020	Faculty, operating and equipment expenses of \$182,000/year.	Grant funding will be sought to support program expenses.
AAS Cyber Security	A fully online program in this field would have applications in many healthcare settings and in a wide geographic area; will require an AA, AS, or AAS degree for admission	2021	No new cost.	None
BAS Early Childhood Education	An online 120-credit, non-licensure program focused on working with children from birth through age five would address a critical rural early education need.	2021	One additional part-time instructor at \$9,600/year.	Grant funding will be sought to support program development.

Student Services

To support and align academic programs with GBCs Mission, Vision and Core Themes, Student Services is committed to improving strategies to promote student success and access to support services. Support services provided are not dependent on students' zip codes. Services are available to ALL students whether they are enrolled in live or interactive video instruction at the main campus, centers, satellites or taking classes completely online.

Brief Description of New/ Expanding Student Services	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Funds
1.0 FTE Advisor	GBC seeks to build more academic advisement to support student retention efforts.	2020	70,000	None
1.0 FTE Student Life/Student Program Manager	To strengthen student life activities GBC requires a student life coordinator.	2019	70,000	None



Truckee Meadows Community College

Strategic Objectives

Vision: Truckee Meadows Community College creates the future by changing lives.

Mission: Truckee Meadows Community College promotes student success, academic excellence and access to lifelong learning by supporting high-quality education and services within our diverse community.

Values: The values upon which Truckee Meadows Community College bases its mission and vision statements are the principles, standards and qualities the college considers worthwhile and desirable. Truckee Meadows Community College is committed to:

- Student access and success
- Excellence in teaching and learning
- Evidence of student progress through assessment of student outcomes
- Nurturing a climate of innovative and creative thought
- Collaborative decision making
- Community development through partnerships and services
- Ethical practices and integrity
- Respect, compassion, and equality for all persons
- Responsible and sustainable use of resources
- Fostering attitudes that exemplify responsible participation in a democratic society

Core Themes: TMCC has established 13 objectives under four core themes: Student Success, Academic Excellence, Access to Lifelong Learning, and Stewardship of Resources:

Student Success: TMCC supports student pursuit of a variety of educational goals, including graduation, transfer, career advancement, and personal enrichment. We realize that the diversity of students attracted to our institution need wide and varied support to reach their goals. High-quality academic support services are essential for students to effectively access and use information that will facilitate their learning and their progress through their academic programs. Interpersonal, intrapersonal, and practical skills are essential components of a holistic approach to

academic and career success. Students must be given the opportunity to develop and advance these skills.

- **Objective 1.** Improve successful completion of students' educational goals, including graduation, transfer, and CTE completion.
- **Objective 2.** Provide high-quality student support through library resources, tutoring, advising, and information services.
- **Objective 3.** Provide student engagement opportunities that build interpersonal, intrapersonal, and practical skills.

Academic Excellence: TMCC values excellence in teaching and learning, and evidence of student progress through assessment of student outcomes. Systematic review and assessment verifies student learning and achievement, improves teaching, and assures quality courses and programs for our students. For our region to prosper economically and sustain a high quality of life, it needs an educated, skilled workforce. By aligning postsecondary education with the current and emerging needs of business and industry, TMCC helps to meet the specific needs of our community. A relevant and engaging learning environment enhances the delivery of high-quality instruction that is critical to academic excellence. Nurturing ongoing professional development supports faculty and staff staying current in their fields, and enhances instruction and effective service to students. Celebration of professional growth encourages this mindset.

- **Objective 1.** Maintain and improve the quality of course, general education, and program offerings through systematic assessment and review.
- **Objective 2.** Offer high-quality programs that meet the workforce educational needs of our community.
- **Objective 3.** Create a learning environment that promotes academic growth for students.
- **Objective 4.** Nurture and celebrate a culture of intellectual and professional growth among faculty and staff.

Access to Lifelong Learning: TMCC welcomes and serves students who may not be ready to enter at the college level, who may not want a traditional degree, or who come to us with prior experiential learning that we recognize and value. TMCC fulfills this commitment by providing equal opportunity for members of our community to thrive academically and professionally. Students learn best in a safe, inclusive environment where they are valued members of the campus community. Welcoming guests fosters a positive relationship with our community. Alumni who remain connected to TMCC support their own lifelong learning and that of current and future students.

- **Objective 1.** Serve as an Open Access institution.
- **Objective 2.** Cultivate a welcoming, safe, and inclusive environment.
- **Objective 3.** Encourage alumni to remain persistent with their engagement in the institution.

Stewardship of Resources: State support is the financial life-blood of the College. TMCC strategically reviews its enrollment marketing and enrollment management processes to ensure that enrollment is stable and NSHE Performance Pool targets are met. TMCC's Foundation provides support to the College by way of scholarships, instructional equipment, professional development, and capital. This support is key to the success of the institution and its mission. Effective, efficient college operations are responsive to the needs of the campus community, are sustainable, and are regularly evaluated to ensure they are meeting the needs of their constituents.

- **Objective 1.** Optimize state-funded revenue.
- **Objective 2.** Maximize and grow non-state-funded revenue streams including grants, fundraising, and Workforce Development offerings.
- **Objective 3.** Maintain and enhance the effectiveness and efficiency of College operations.

Academic Affairs

Academic Affairs is undertaking the following initiatives towards student success, academic excellence, and access to lifelong learning:

- Focusing on part-time students to address the disparity between full-time and part-time student persistence and degree completion
- Developing a faculty advising model to assist with the academic advising needs of students
- Offering the Association of College and University Educators (ACUE) Course in Effective Teaching Practices to assist faculty with implementing essential practices shown to improve student outcomes
- Implementing a Learning Commons model within our library space to encourage communication and collaboration and enhance student participatory learning
- Expanding Learning Communities towards student success
- Encouraging completion of gateway math and English courses with additional messaging and drop holds on key courses in the gateway completion pathway
- Increasing dual credit offerings within Washoe County School District high schools

Division of Business and Social Sciences

The Division of Business and Social Sciences recently began new programs in Social Work and Hospitality and Tourism and will focus on growing these programs in the coming academic years. The Division will be revamping Secondary Education degrees in partnership with NSHE 4-year institutions with an initial focus on math, English and history. The Division is also exploring a new degree program in Quality Assurance in partnership with TMCC's Technical Science and Science Divisions. Finally, the Division will be exploring the feasibility of adding an associate degree in Physical Education or a closely related field.

Division of Liberal Arts

The Liberal Arts Division recently introduced a new AA degree and Advanced Certificate in Graphic Arts and Media Technology, with specialties in Graphic Design, Motion Graphics, and Web/UI Development. The Graphic Arts and Media Technology program is part of a 3+1 agreement with Nevada State College (NSC), where students can complete their fourth year of a BA program online or by NSC instructors teaching on the TMCC campus after completing the AA and Advanced Certificate. The Division plans to introduce an AA Communication Studies and Creative Writing emphasis under the existing AA English.

Division of Technical Sciences

The TMCC Division of Technical Sciences continues to work with industry and community partners, and its program advisory boards, to ensure programming is meeting the needs of the local economy. With the support of the Governor's Office of Economic Development (GOED) and local employers, the division is developing a Bachelor's of Applied Science pathway to Cyber-Physical Manufacturing to embrace the emerging Industry 4.0 needs. The Division has increased its enrollment in the Advanced Manufacturing program (75 students to 522 in four semesters) to serve the needs of major employers including Tesla Motors, Panasonic Energy of North America and others. As these companies continue to build up and expand, the need for training beyond certificates and associate degrees is emerging and these graduates will serve as the pipeline to the BAS.

In addition, the Division has seen an increase in enrollment in its Apprenticeship programs in partnership with local unions and through a U.S. Department of Labor grant, and is developing skills certificates for these students to earn a credential that stacks into the certificate and degree. The

Division is also looking to expand its Automotive Technology program to include hybrid technology, and is creating other skills certificates (HVAC, Diesel) that stack into existing programs to award workforce credentials to students as they progress through their programs of study.

Division of Sciences

TMCC has experienced unprecedented increased demand in allied health career field offerings and continues to diversify and expand in an attempt to meet the workforce needs of our service area. In order to respond to the industry workforce needs and student demand in the allied health care fields, TMCC has expanded existing program, fostered partnerships with local health care providers to identify high demand training programs to complement our current offerings, and collaborated with other NSHE institutions to bring new training opportunities to students in our area.

TMCC has expanded offerings in all Allied Health Programs. An MRI certificate was recently added to the Radiologic Technology Program, and cohort sizes were significantly increased in Nursing and Dental Hygiene. We have also expanded offerings in prerequisite courses in Biology, Chemistry, Community Health Science, Mathematics, and Nutrition to support Allied Health Programs and our diverse population of students pursuing transfer degrees. We are currently working to further expand and diversify our Radiologic Technology program by adding certificates in Computed Tomography (CT) and Mammography. These programs will be advertised to local and regional practitioners in the field and made available in an online format, when possible, to increase our capacity to meet growing industry needs. We are also working to expand NSHE collaborations that bring training opportunities to students in our area, so students do not have to relocate to pursue the training. We currently have collaborations with the College of Southern Nevada (CSN) in Surgical Technology and Radiation Therapy, and are working on a collaboration with Great Basin College (GBC) in Ultrasound. In partnership with local area hospitals we plan to add a Medical Laboratory Technician Associate's of Science degree, and are exploring the addition of a Bachelor of Applied Science in Career and Technical Education, to provide advancement and management opportunities to our local allied health trained workforce. This degree pathway is nationally recognized, but is not currently available in our region, so workers in our area go elsewhere or online to obtain this credential. We also plan to add a Veterinary Assisting program, new Skills Certificates in Dental Assisting, CNA training focused on meeting the workforce needs of local long-term care facilities, and a year-round, online Bachelor's level Nursing program (e.g., RN to BSN). Many of our Associate's in Nursing graduates currently obtain this training through an institution in Idaho. These strategic initiatives will help address significant needs in the local job market.

Academic Programs

The following table summarizes new academic programs that TMCC is planning to implement in the next four years (2019-2023):

New Program Name/Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
Quality Assurance Certificate	We are investigating the feasibility of creating an AAS degree in Quality Assurance. A preliminary feasibility study was conducted in Spring 2018 and employers are in the process of being surveyed in Fall 2018 to determine need.	Fall 2019 or 2020 if needed	Negligible, all current faculty/staff could be used to accommodate the additional workload so it would be the cost of adding and offering a few new classes.	None
Secondary Education	Current degrees in secondary education will be revamped to better partner with NSHE 4 year institutions on 2+2 agreements providing seamless transfer opportunities. Initial focus will be on Math, History and English.	Fall 2019-Fall 2020	No new costs will be incurred as this is not a new program.	None
Physical Education	Research will be done to determine the feasibility and need for an associates degree in physical education or a closely related field. This is in response to the Program Unit Review and the addition of Athletics to TMCC which may support this program	Fall 2020	\$70,000 for one faculty member and supplies	None
Teacher Certification	We are investigating offering alternative teacher certification for individuals who already have bachelor's degrees. To design the program, we will work with the Nevada Department of Education and Washoe County Schools. We will partner with Washoe County School District to provide field-based experiences at appropriate grade levels and content areas.	Fall 2020	We already have many qualified faculty but may need more clinical teaching faculty to plan and implement logics of field experiences.	None
Communication Studies, AA	The Associate of Arts in Communication Studies is designed for students seeking careers in the communication field and for those who hope to enhance their employment potential. Students will focus upon theoretical, methodological, and practical application of communication in the public and private sectors. The course of study is designed as a university transfer degree or for students wishing to enter the workforce in entry level positions. The Communications AA will be fully accepted at any four-year institution in the NSHE system and is fully transferable to most four-year institutions nationally.	Fall 2019	\$75,000 for one faculty member	None

New Program Name/Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
Entertainment Technology Certificate	<p>TMCC, partnership with the Washoe County School District and the University of Nevada, Reno, is exploring an entertainment technology pathway. This program would include dual-credit classes in a high school that leads to a certificate of achievement and employment, or transfer to a TMCC or the university degree program</p>	Fall 2019	\$70,000 for one faculty member and equipment	None
English AA, Creative Writing Emphasis	<p>TMCC's existing English AA Degree has evolved into a creative writing focus with a significant percentage of declared majors taking the full suite of existing creative writing courses. UNR requires inclusion of a creative writing portfolio for acceptance into 300 level creative writing coursework upon transfer. TMCC's Creative Writing courses routinely fill with both declared English majors and community members seeking a terminal AA. An emphasis in Creative Writing will serve the transfer and the two-year terminal degree seeking student equally well.</p>	Fall 2020	<p>None. The English Department already has a well-established cohort of Creative Writing Instructors capable of growing this emphasis out of existing courses and the addition of a couple of portfolio and workshop specifics courses.</p>	None
Dental Assisting Basic Training Skills Certificate	<p>This stack-able certificate will articulate into the current TMCC Dental Assisting Program Certificate of Achievement and Associate of Applied Science in Dental Assisting. The Skills Certificate also provides an avenue for those who are not accepted into the current advanced dental assisting program at TMCC, to learn an entry-level skill on which they can build a career. In the last two years, the demand from the dental community to train students in the basics of dental assisting; radiation health and safety, infection control, and dental procedures, has increased.</p>	Fall 2020	<p>\$55,000 for one full-time faculty, and one additional part-time faculty for the workshop (\$2240)</p>	Perkins for the full-time position

New Program Name/Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
Mammography Certificate	A mammography tech is trained to operate radiologic equipment used to examine breasts for cancer and other abnormalities. An extensive educational background in radiology or radiography is among the requirements for becoming a mammography tech. We plan to develop a skills certificate in Mammography	Fall 2020	\$75,000 for one faculty member, \$100,000 for equipment, and lab renovation	Perkins
Ultrasound certificate	Training in Ultrasound technology is greatly needed in the area. Developing this program at TMCC would require the hiring of new faculty. We propose offering this training in collaboration with Great Basin College, in a format similar to our collaboration with College of Southern Nevada to offer Surgical Technology and Radiation Therapy training,	Fall 2020	Space to host 1-3 Ultrasound machines and an examination table for lab training, and distance technology lecture space	In collaboration with Great Basin College and local clinical facilities
Veterinary Assisting Certificate	This program will prepare entry-level animal care workers for veterinary clinics, hospitals, and research facilities. This credential will stack into our current Veterinary Technician program.	Fall 2021	\$75,000 for one faculty member	Perkins along with local veterinary business partnership support
Medical Laboratory Assistant Associates Degree Program	Medical laboratory technologists (commonly known as medical laboratory scientists) and medical laboratory technicians collect samples and perform tests to analyze body fluids, tissue, and other substances. This is an emphasis program leading to completion of an AS transfer degree aligned with the Clinical Laboratory Science BS degree	Fall 2022	\$75,000 for one faculty member	Perkins along with local hospital partnership support
Year-round, online Bachelor's level program in Nursing (e.g., RN to BSN)	The nursing shortage in the state of Nevada continues to be a pressing problem. To help address the continued demand in the state, TMCC is planning to add a year-round, online Bachelors level program in Nursing, to complement our current expanded Associates program in Nursing. Our current associate's graduates enroll in out of state online institutions to obtain this credential.	Summer 2023	\$150,000 for two faculty members	None
Bachelor's level program in Career and Technical Education	Advancing to a management level in many Allied Health and Career Tech fields requires a bachelor's degree. Pathway bachelor's degrees do not exist in all areas, including Dental Assisting, Veterinary Technician and many technical areas where an Applied Associates degree is attained. Local allied health and career tech employees who want to obtain a bachelor's in order to advance in their workplaces currently go outside of Northern Nevada or online to obtain this credential. We propose a program that would meet this local need.	Fall 2023	\$60,000 for one faculty	Perkins

New Program Name/Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
Apprenticeship Skills Certificates	Add this stackable credential (to CA and AAS) for students in TMCC apprenticeship programs after they complete their credits for the specific apprenticeship.	Fall 2019	Uses existing resources	None
Cyber-Physical Manufacturing - Bachelor's Degree	In coordination with local employers and state agencies to meet workforce needs (GOED), we would like to develop a BAS that is the next step from our current AAS degree in manufacturing technologies.	Fall 2019	Uses existing equipment and faculty.	State WINN funds were awarded for equipment in 2017.
Diesel Skills Certificate	Credential for students in the diesel technology program. Stackable to Certificate program.	Fall 2019	Uses existing equipment and faculty.	None
Electro-Mechanical Technician Skills Certificate	In coordination with local employers, and to support a registered apprenticeship program approved by the State Apprenticeship Council/OWINN, the Technical Sciences proposes an Electro-Mechanical Technician Skills Certificate.	Fall 2019	Uses existing equipment and faculty	None
Expansion of Automotive Program for Hybrid/Electric New emphasis existing degree	To keep current with emerging trends, the Tech Sciences division would like to expand the auto program to include maintenance of hybrid and electric vehicles.	Fall 2019	Uses existing equipment and faculty. \$50,000 startup program support	WSCH CTE funding in this CIP code.
Food Manufacturing Skills Certificate	This program would provide entry-level training for the food manufacturing industry. The program will provide an understanding of the selection, preservation, processing, packaging, and distribution of safe and foods.	Fall 2019	\$75,000 startup for equipment purchases	Private and industry contributions, Perkins, grants
HVAC Critical Systems Skills Certificate	To meet new local businesses coming into the Reno area the Technical Sciences Division proposes a Skill Set Cert that prepares students to install, maintain, service, troubleshoot, and repair critical systems such as in data process centers and hospitals.	Fall 2019	Uses existing equipment and faculty	None
Microsoft Certification	A certificate to mirror the Microsoft MCSA for students who complete the classes.	Fall 2019	Uses existing equipment and faculty	None

Student Services and Diversity

The following table summarizes new student services that TMCC plans to implement in the next four years (2019-2023):

Brief Description of New/ Expanding Student Services	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
Academic Advisement Model	Researching best practices and opportunities to incorporate faculty academic advisement into current advising model.	Fall 2019	TBD based on model selected	
Blind Skills Training	Provide assistive technology training for blind and low vision individuals so they can be successfully access college courses.	Fall 2019	\$30,000	DETR-VR Third Party Cooperative Agreement
Distance Advising	Utilization of BlueJeans videoconferencing software to facilitate distance advising appointments for students unable to attend in-person meetings	Fall 2019 full implementation	\$750 annually for BlueJeans license	Excess Credit Fee
Employer Solutions – Employer Education Joint project: Career Center, CareerConnect, Re-Entry Program	Implement Employer education modules to encourage hiring of individuals who come to the workplace with potential barriers: those from backgrounds of poverty, justice involved individuals and individuals with disabilities.	Spring 2019	\$75,000 (includes existing Career Center staff salaries)	Additional funding for events will be sought from industry partners when appropriate.
Faculty Diversity Advocates	Up to 4 faculty member additional assignments reporting to the Equity, Inclusion, and Sustainability Office. These positions will receive course-release time in order to serve as a Diversity Advocate and liaison for diversity initiatives with faculty and the college community.	Full implementation by Spring 2019	\$30,000/yr	
Faculty of Color Coalition	Faculty affinity group focusing on those that identify as people of color. Includes meetings, education, and programming.	Full implementation by Spring 2019	\$2,000	
FAFSA Completion Challenge	The FAFSA completion for Reno, Nevada is below the national average. To help address this issue, TMCC received a grant from the National College Access Network. We are expanding our financial aid outreach in 2019 with several targeted events designed to entice prospective students to apply for financial aid. Beginning in February 2019, we will conduct a FAFSA Fiesta evening, which is an open house style event. This will be followed in March with FAFSA Madness, where we will hold a day long open house to assist students in completing their financial aid files and verification requirements. These events will become mainstreamed events after the grant ends.	February 2019	Supplies: \$26,500 Development/ Other: \$12,500 Total Estimate: \$39,000	National College Access Network

Brief Description of New/ Expanding Student Services	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
First Year Experience Programming for At Risk Youth	The program will provide Getting Ahead workshops and stipends, EPY tuition and mentoring for low –income first time college students who are under age 25 and are from one of the following at-risk groups: aged-out foster youth, single parent, receiving SNAP benefits, or involved with the Justice System	Spring 2019	\$81,000	Nevada Women’s Fund Giving Circle
Integration of Athletics Regulations into Financial Aid	With the implementation of men's and women's soccer starting Fall 2019, the financial aid office will ensure that procedures and practices are in compliance with NJCAA regulations.	Fall 2019	\$0 additional costs, unless scholarship dollars are raised	Still being pursued
Expansion of International Student Services	Increase the number of international students served by focusing on recruitment to target community college markets and scaling up our partnerships and collaborations.	Fall 2019	\$75,000 annually	
Jump Start Expansion	Expand services of dual enrolled students by expanding class offering models to qualifying students. Example of these offerings would be the Spring 2019 Hybrid Five initiative where five hybrid classes will be offered to high school students at TMCC's Meadowood Center.	Spring 2019	\$1,000	n/a
Expansion of Men of Color Program	TMCC's Men of Color Mentorship Program (MOC) aims to motivate underrepresented high school sophomores to attend college. The program will be expanded in Spring 2019 to include an additional high school, bringing the total number served to 80 at the following high schools: Galena, Hug, North Valleys and Reed.	Spring 2019	\$9,500	n/a
Re-Entry Program Expansion/ Getting Ahead	Expand Re-Entry program to support Justice Involved and individuals from a background of poverty (including those receiving public assistance) to attain skills necessary to sustain gainful/living-wage employment. The Re-Entry Program is working with other NSHE institutions, Washoe County Sherriff’s Office and the Nevada Department of Corrections to develop a more comprehensive, state-wide program for prison education and re-entry services.	Fall 2019	\$200,000	WINN Grant Funds SNAPET – federal match drawdown Federal Second Chance grant Displaced Homemakers Grant (DETR)

Brief Description of New/Expanding Student Services	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
Starfish by Hobsons Retention Module and Early Alert/ Degree Planner	<p>Holistic approach to student success and retention facilitates communication about resources, referrals, and student progress. Additional elements to be added: kiosks for appointment scheduling, intake form, student data analytics, career connections and degree planner. Coordinator to guide implementation of new elements/ expansion of existing tools.</p>	Spring 2019	<p>\$85,208/yr for Hobsons/ Starfish Contract. \$78,000/yr for salary and benefits of Coordinator to implement the software Total: \$163,208</p>	
TMCC Veteran Recruitment	<p>Veteran Services plans to launch a new veteran recruitment strategy over the next four years. The plan is to establish relationships with various military bases within a 500-mile radius of Reno, Nevada. There is a huge untapped active duty and national guard population on the west coast of the United States and the goal is to bridge the gap between that population and the many great services and programs that TMCC has to offer. This initiative should result in a direct increase of student veteran and dependent enrollment at TMCC and help continue to build on our reputation of being the most veteran friendly college in northern Nevada.</p>	Fall 2019	\$5,000-\$7,000	none
New Wizard the Lizard Mascot	<p>TMCC's Wizard the Lizard will need to represent TMCC proudly at home soccer games starting in Fall 2019. To avoid schedule conflicts, a second mascot costume is needed. In addition, the lifespan of a mascot costume is 5-6 years and the current costume is on year four. Soon a new and more fierce mascot costume will be needed to cheer the TMCC Lizards to victory!</p>	2019	\$9000-\$10,000	<p>non-TMCC entities pay a per hour fee when scheduling Wizard. However, 95% of appearances are TMCC related.</p>



Western Nevada College

Strategic Objectives

Mission

Western Nevada College inspires success in our community through opportunities that cultivate creativity, intellectual growth and technological excellence in an environment that nurtures individual potential and respects differences.

Strategic Initiatives

WNC has established ten strategic initiatives under three core themes.

Theme 1: Student Success

- WNC students graduate with a degree or certificate; and
- WNC students engage in the college experience.

Theme 2: Institutional Excellence

- WNC is the educational institution of choice in western Nevada;
- All academic programming is of the highest quality;
- All support programs and services meet the needs of the WNC Community;
- WNC has an exemplary system of governance and management; and
- WNC strives for institutional sustainability.

Theme 3: One College Serving Many Communities

- WNC promotes access to higher education in western Nevada;
- WNC serves as a catalyst for personal and community enrichment; and
- WNC promotes community connections.

Academic Programs

The following table summarizes new academic programs that WNC plans to implement in the next four years.

New Program Name/Expansion of Existing Program	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
Bachelor of Applied Science (Technology)	This program will prepare students for managerial careers in technical fields and offer a seamless transition from an associate's of applied science degree in a technical field to a bachelor's degree.	Fall 2020	\$250,000-\$300,000	Private donations and grant funding for start-up costs; state formula funding after program is established
BAS Construction Management; new emphasis area in residential and commercial inspection	WNC currently offers a 12 credit program in residential inspection but not all 12 hours apply towards the BAS in Construction Management. A new emphasis area would allow those students to pursue the BAS degree more easily.	Fall 2019	No additional cost, courses already exist.	None
Building Trades Apprenticeship Certificate of Achievement	The Certificate of Achievement in Building Trades is designed as a stackable credential and combines professional training and experience with general education components This certificate will serve as a pathway for students interested in pursuing the AAS Technology Degree.	Spring 2019	No additional costs—all courses and certification pathways currently exist at WNC.	None
ASE Automotive Industry Skills Certificates (9)	Automatic Transmission Technician; Brake Technician; Electrical Technician; Engine Performance Technician; Engine Repair Technician; Heating and Air Technician; Maintenance and Light Technician; Manual Transmission Technician; Steering and Suspension Technician	Spring 2019	No additional costs—all courses and certification pathways currently exist at WNC.	None
Advanced Emergency Medical Technician Industry Skills Certificate	Prepares students to incorporate knowledge of basic and advanced emergency medical care for critically ill and emergent patients to reduce the morbidity and mortality associated with acute out-of-hospital medical and traumatic emergencies. The A-EMT provides care based on site assessment data and works alongside other EMS and health care professionals as an integral part of the emergency care team.	Spring 2019	No additional costs—all courses and certification pathways currently exist at WNC.	None
Paramedic Industry Skills Certificate	Prepares qualified students for a career as a paramedic (Emergency Medical Technician, Paramedic-EMTP).	Fall 2019	\$100,000- 150,000	Private donations and grant funding for startup costs. Partnership with regional EMS training centers provide startup support in faculty and equipment.
AAS Paramedic Medicine	Prepares qualified students for a career as a paramedic (Emergency Medical Technician, Paramedic-EMTP). AAS program requires general education credits and is designed for transition to BAS Technology emphases.	Fall 2019	\$100,000- 150,000	Private donations and grant funding for startup costs. Partnership with regional EMS training centers provide startup support in faculty and equipment.
Skills Certificate and Certificate of Achievement Industry 4.0	Prepares students to excel in an automated manufacturing level at Industry 4.0 level. General education, current courses and Mechatronics.	Spring 2019	Existing course	Currently working with industry partners and equipment manufacturers.

Student Services

The following table summarizes new student services that WNC plans to implement in the next four years.

Brief Description of New/ Expanding Student Services	Brief Description	Date of Implementation	Estimated Cost	Funding Sources Outside of State Dollars
Jump Start College Expansion	Dual credit high school program currently serving 415 students by offering up to fifteen transferrable credits per semester to qualified junior and senior high school students.	Program launched in Fall, 2014 with nine high schools. WNC will continue program and continue to fund support and operations.	\$300,000/year Coordinator, Cohort Coaches, Travel and Operating	Student Fees and Grants
Veterans Resource Center Expansion	Cohort model support program to assist veterans in college access and success.	Launched Fall of 2013; Significant expansions in Fall of 2014 and Fall of 2016. Continuation and expansion planned for Fall 2019.	\$150,000/year, Coordinator, Assistant, Travel and Operating	Grant sources for continuing support.
Latino Resource Center	Cohort model support to assist first generation, low-income, non-native English speakers in college access and success.	Fall 2010, significant expansion in Fall 2016. Continuation and expansion planned for Fall 2019.	\$125,000/year Coordinator, Cohort Coaches, Operating and Travel	External funding is being pursued.
First Generation, Nevada Promise, Native American, and Bridge Cohorts	Structured cohorts with full time block schedules, embedded coaches and coordinator	Fall 2019	\$120,000/year Coordinator and Cohort Coaches	External funding will be pursued at the appropriate time.
Orientation Program	Enhance Orientation program along with a 1 or 2 day program similar to Nevada Fit.	Fall 2019	\$55,000/year Outreach Counselor	External funding will be pursued at the appropriate time.



Desert Research Institute

This section follows the NSHE format for DRI, as its institutional structure is unique among NSHE institutions in that it is not degree granting but serves as an integral component of NSHE's advanced training and research portfolio. DRI's research activity and achievements support the Board's strategic goal of co-developing solutions to the critical issues facing 21st century Nevada and raising NSHE's overall research profile.

Strategic Objectives

As an entrepreneurial research institute, DRI faculty develop innovative research concepts and secure external funding from federal, state, local, and private funding partners and sponsors to support their research. Given the scientist-driven nature of the organization, DRI's strategy is framed around bolstering the science-support enterprise and creating additional opportunities for researchers to advance research critical to Nevada's future. DRI's core strategic directions directly map on to this goal by building and diversifying DRI's financial, social, and public capital.

DRI's core strategic directions are:

- **Strengthen Partnerships with Federal Research Agencies**
Desired Outcome: Secure reliable funding from current federal research sponsors and identify new opportunities.
- **Increase Corporate & Public Partnerships**
Desired Outcome: Establish new partnerships with industry and commercialization of DRI intellectual property.
- **Expand Individual and Foundation Philanthropic Efforts**
Desired Outcome: Increase research funding from private foundations and individual donors.
- **Enhance NSHE Collaborations**
Desired Outcome: Form equitable and mutually-beneficial partnerships with other NSHE institutions, enhance state support for these collaborative research endeavors and infrastructure, and establish a broad understanding of DRI's role within NSHE.

Two additional strategic directions support the proactive engagement of the audiences critical to expanding and diversifying the DRI portfolio of resources:

- **Expand Education Initiatives**

Desired Outcome: Create synergies between DRI's education-focused research and the Institute's traditional environmental science enterprise while addressing critical Nevada education needs.

- **Enhance Public Engagement**

Desired Outcome: Raise DRI's public profile and optimize connections with specific audiences that connect with the strategic directions.

DRI researchers are among the top scientists in the world in their specialties, and they are defining the future trajectories of their respective scientific fields. The highly entrepreneurial nature of the Institute is what has made DRI successful since its founding nearly 60 years ago. To continue this legacy, DRI's approach to developing strategic research directions must continue to be driven by research faculty.

In September 2018, DRI launched a Strategic Research Prioritization effort focused on identifying imperative research areas that constitute the core capabilities of the Institute and frontier research realms that will inform new investment opportunities. These strategic research priorities will guide decisions related to allocation of resources and alignment of DRI's administrative framework.

Once this process is complete in mid-2019, DRI will update this document to reflect these new research priorities.

Academic Initiatives

DRI will continue to support UNR and UNLV efforts to become part of the top 100 American research universities, as designated by the Carnegie Foundation as a Highest Research Activity (R1) University. Although the Carnegie charts do not rank DRI because we do not grant degrees, DRI plays an important role in supporting graduate student recruitment and success within the system. More than 80 DRI research faculty are involved in teaching and advising at our fellow NSHE institutions, and in FY17, more than 35 graduate students worked in DRI laboratories and with DRI research faculty on projects throughout Nevada and around the world, including in Antarctica and Greenland.

DRI has established a collaborative agreement with UNR and UNLV, through which DRI graduate student faculty advisors will receive partial salary coverage for time spent advising graduate students. This new partnership recognizes that 100-percent of DRI research faculty salary is supported by external grants and contracts and that universities benefit from the time and effort put forth by DRI graduate advisors, both financially and via Carnegie Tier 1 metrics. This new partnership with UNLV and UNR parallels DRI's new effort to solidify our educational enterprise through the formation of a new Office of Education in July of 2018.

Both of these mission-driven efforts build on the original 1959 DRI Nevada Legislative Mandate, which states that a core element of DRI's purpose is to "encourage and foster a desire in students and faculty to conduct research," "discover and develop talent for conducting research," "and promote all research within the system generally." While DRI's soft-money culture differs from that of other NSHE institutions, the priority remains to produce high-quality science and leverage a research-focused approach to help NSHE attract and train the next generation of great scientists and engineers in Nevada.

NSHE Collaborations:

- **Graduate Research and Postdoc Recruitment Programs with UNR and UNLV**
 - ◇ DRI will continue to work collaboratively with UNR and UNLV to ensure the continuation and evolution of high-quality research and graduate programs in order to – 1) sustain NSHE’s national research competitiveness, 2) develop a pipeline to produce a skilled workforce that can serve the needs of Nevada’s new economy and growing technology and manufacturing industry sectors, and 3) help Nevada’s higher education students develop the cutting-edge skills and expertise that are relevant to our nation’s emerging research needs. DRI will continue to investigate the efficacy of statewide graduate programs and funding mechanisms for new programs.
 - ◇ In 2016, DRI initiated efforts with both UNLV and UNR to create a new Joint Postdoc hiring program. The goal of this program focuses on recruiting new postdoctoral students to Nevada and retaining them at our research institutions as productive and active research faculty. This program will continue.
- **Community College Outreach and Collaborative Training Programs**
 - ◇ DRI will continue to pursue avenues for the development of new undergraduate research training opportunities between NSC faculty and students and DRI faculty, such as inclusion of NSHE community college outreach programs in DRI faculty grant proposals and fundraising for an underrepresented/first generation pre-graduate school training program.
 - ◇ DRI is also committed to increasing NSHE student exposure to geoscience education and increasing the number of geoscience prepared graduates entering the workforce in Nevada and across the nation. Through Nevada’s GeoGateway Program, funded in 2018 by the National Science Foundation, DRI is helping NSC and CSN create a structured pathway linking academic and research institutions in Southern Nevada to train the region’s new generation of geoscientists and recruit students taking geoscience-related coursework. Within four years, the program hopes to generate a 25-percent increase in Environmental and Resource Science majors and graduates.
- **Cybersecurity Training and Education**
 - ◇ DRI will seek external funding to support faculty time for mentoring NSHE community college students in cybersecurity. DRI will also pursue collaborative workforce development programs, including expansion of for-credit internships in cybersecurity for TMCC and WNC students and integrating NSHE community college students into DRI research programs.

DRI Education Initiatives:

- **Office of Education**
 - ◇ DRI’s new Office of Education serves as the gateway to the Institute’s educational activities, including the PreK-12 STEM education program Science Alive, citizen science projects, and National Science Foundation broader impacts projects. The creation of the Office of Education in July 2018 has allowed DRI to consolidate existing education initiatives and programs for PreK-12 students and educators, undergraduate students, and the broader community. It also serves the educational outreach interests of the Institute and allows for investment in the growth of DRI education and outreach programs.
 - ◇ DRI’s flagship education outreach program, Science Alive (formerly GreenPower,) has existed for 16 years through support from both public and private partners. The mission of the Science Alive program is to support PreK-12 educators in science-based environmental

education by providing tools and resources so that all students acquire the knowledge and skills needed to work, live, and contribute in our community. Science Alive will continue to provide inquiry-based STEM curriculum at no cost to Nevada teachers through the program's Green Boxes, self-contained teaching kits that provide educators with unit lesson plans along with all of the supplies necessary to conduct each activity. Every box employs active learning strategies to engage students in hands-on projects that foster critical thinking and problem-solving skills. These standards-based lessons are designed to enhance student literacy in various STEM subject areas, from water conservation in the desert Southwest to the environmental impacts associated with natural resource extraction.

- **Nevada Graduate Fellowship**

- ◊ DRI has proposed the creation of a Nevada Graduate Fellowship, which endeavors to recruit top-tier students to Nevada in order to develop the next generation of home-grown scientists and engineers. The Fellowship will be available to students pursuing doctoral degrees. Students will conduct dissertation work with DRI scientists and matriculate at any Ph.D. degree granting institution within NSHE. This is modeled after the prestigious National Science Foundation Graduate Fellowships.
- ◊ The program will – 1) support students whose work will solve key challenges facing society, 2) serve as Nevada's premier graduate recruitment resource aid, 3) directly support the NSHE goal of achieving R1 status at the universities, and 4) produce life-long leaders that contribute significantly to Nevada's economy, scientific innovation, and teaching.
- ◊ This new program aligns with DRI's long-term goal of establishing a Ph.D. program at DRI.

DRI Research Initiatives:

The list of potential new and expanded DRI research initiatives shown below is representative, but not inclusive, of the wide range of research areas planned for addition or expansion in upcoming years. Many of these foci link, or have the potential to link, with the listed education initiatives.

Core Research Theme Improvements:

Atmospheric Research and Assessment

- Building on its long-term success in monitoring environmental variables (e.g., air quality, CO₂, atmospheric aerosols and pollutants, radiation, temperature, wind velocity and direction) and modeling their distribution, DRI will expand existing research to include monitoring, modeling, early detection, and multivariate analyses of complex atmospheric data. DRI will continue to expand its research using and developing proxies for assessing weather and climate trends. DRI will expand its investigation of recently reported findings that particulate matter in the air inhibits precipitation formation.
- Building on the proven success of our weather modification and cloud-seeding programs, DRI will use various research methods to assess the effectiveness of cloud seeding for promoting enhanced snowfall in snow-fed arid-land river systems across the Western U.S.

Hydrology and Water Resources Management

- DRI is expanding its basic hydrologic sciences and applied water research portfolio across the institution to better understand, utilize, and manage water resources across Nevada, the nation, and internationally. Going forward, DRI will place an added emphasis on water policy via a collaboration with Nevada's Kenny Guinn Center for Policy Priorities, a renewed focus on sustainability and resource management in the Lake Tahoe Basin, and new applications of DRI's

cutting-edge ice-core analysis technology.

- Utilizing DRI's collaborative research environment and industry-driven approach to creating decision support tools for Nevada's water managers, DRI faculty will also continue to build upon their work with Google to provide and enhance open-source tools to visualize and interact with climate and remote-sensing imagery.

Ecosystem Sciences

- DRI core ecosystem science programs investigate the mechanisms of landscape change and how they interact with human activities over a wide range of spatial and temporal scales. From life at the molecular/microbial scale to ecosystem and agricultural sustainability through quaternary geomorphology, DRI will research the dynamics of surface environments in the context of the Earth's coupled human-natural systems.
- DRI faculty will also continue to pioneer new research methodology to study and better understand how life exists in Earth's most extreme environments. This research will be critical to helping NASA prepare future missions in its search for life beyond our planet.

Emerging Research Themes

Public Health and the Environment

- Through a collaborative partnership formed with Renown Health in 2016, DRI has undertaken a comprehensive approach to improving population health across Nevada through the Healthy Nevada Project. DRI is focused on integrating personal healthcare and environmental data with socioeconomic determinants to help Nevada address some of its most complex environmental health problems going forward. DRI researchers plan to expand this program beyond Northern Nevada to cover the entire state, and will explore expanding into other parts of the U.S.
- DRI faculty will expand a significant research effort to attract funding and publish findings related to better understanding the impacts of inhaled aerosols including tobacco and marijuana smoke, e-cigarette vapors, and wildland fire smoke that is increasingly impacting urban areas.

Advanced Autonomous Systems in Environmental Research

- DRI will build upon expertise in environmental sensing as well as use of unmanned aircraft, ground-based autonomous vehicles, and the Internet of Things (IoT) to increase research capabilities in areas such as smart communities and transportation, remote sensing of agriculture and vegetation, topography, water quality, and measurement of aerosols and air quality.

Mission Support Geosciences

- DRI is working to enhance its ability to support critical energy stewardship and military operations missions. This includes assessing terrestrial and near-surface atmospheric environments, including the impact of military operations on the environment (i.e. range sustainability), terrain analysis, hydrologic flow, and the impact of environmental conditions on military operations (e.g., mobility, counter IED). Sustainable support for such assessments will focus on funding from the Department of Energy (DOE) and the Department of Defense (DoD) in collaboration as appropriate with DOE and DoD prime contractors.

Environmental and Societal Impacts of Climate Variability and Change

- DRI will continue to expand its research expertise regarding the impacts of climate variability and change on resources and ecosystems (in Nevada and other Western states) in collaboration with key authorities as well as with state and federal agencies. DRI will further its climate research, monitoring and service efforts on how natural systems and human society must mitigate or adapt to climate variability and change.

Advanced Natural Resource Monitoring in Response to Extreme Weather/Climate Events

- Leveraging the Western Regional Climate Center, DRI will continue to provide improved data products and related research that help water and fire management personnel make better decisions related to the increased frequency of drought and extreme wildland fire events across much of the U.S.
- Through the continued development of a cloud-computing web application for on-demand processing and visualizing climate and remote sensing data, DRI and its academic and private-sector partners aim to lead opportunities for advanced natural resource monitoring and process understanding and better inform environmental decision making.
- DRI is committed to the continued accessibility of climate and remote sensing data archives to researchers, decision-makers, and the general public.

Artificial Intelligence, Data Management, Machine Learning, and Analytics Solutions

- Building on the successful application of advanced data analytics and high-performance computing underpinning DRI's Applied Innovation Center and the new Institute for Health Innovation collaboration between the DRI Foundation and Renown Health, DRI will explore expanding these capabilities across the Institute in specific relation to the application of machine learning and artificial intelligence (AI) solutions for better data management and analysis.
- DRI faculty will continue working at the forefront of new approaches to natural resource and urban infrastructure instrumentation, advanced data collection and integrated analysis to support intelligent decision-support systems throughout Nevada and around the world.

Mining and the Environment

- DRI plans to expand its support for one of the state's largest industries through environmental research related to mining operations. This includes, but is not limited to, the application of DRI expertise and capabilities in the areas of data analytics, cybersecurity, advanced autonomous systems, environmental monitoring, and water resource management.
- Additionally, DRI hopes to engage international mines by assessing the environmental impacts of legal and illegal mining operations and the implications of climate for the mining industry.

Research Commercialization and Industry-Driven Innovation

Desert Research Corporation (DRC)

- The DRC serves as the technology commercialization partner to DRI. The DRC aligns DRI faculty expertise with market-based solutions targeting some of the most complex sustainability challenges of our era.
- DRC staff will continue to establish DRI's investment business process and structure an innovation pipeline that replicates industrial R&D, extending from basic science to commercialization. The DRC enables a dynamic business process that extends from the conduct of basic and applied science to the translation of science to specific market-based solutions, and then captures that created value through a variety of commercialization options.
- To date, DRC has created two subsidiaries – Tu Biomics and Predira, both of which are seated within the agriculture technology industry. These for-profit entities are licensing DRI intellectual property, seeking investment for operating capital, and scaling their respective business opportunities.
- There are 2-3 additional subsidiaries under development as of October 2018 that are targeting a diverse portfolio of industries.

WaterStart

- Connecting DRI faculty with Nevada's workforce and economic development initiatives, WaterStart will continue to leverage DRI's expertise to advance new technologies and provide innovative solutions to Nevada's water management agencies, water industry companies and policy makers to spur economic growth in the water sector.
- The WaterStart business model involves a joint venture between academic, public, and private sectors. Each partner brings critical resources to create a mechanism to accelerate the economic cycle through applied research. These resources will lead to technology commercialization that will bring high-value, shared services to a broad range of public and private sector clients as well as an advanced workforce with core technology skill and domain expertise to meet employers' needs and attract technology-focused companies to Nevada.
- At the same time, the WaterStart's efforts will enhance NSHE's goal of strengthening public private partnerships to generate additional sources of nonfederal grants and contracts.