COLLEGE OF ENGINEERING

Making a world of difference.[sm]

STRATEGIC PLAN

Summary of the Strategic Plan of the College of Engineering at the University of Nevada, Reno

Background: The engineering program at the University of Nevada, Reno was established in 1889 as the School of Mechanic Arts and Mining and later in 1905, as the College of Engineering. Since that time, the College has enjoyed continuous growth in undergraduate and graduate programs, as well as steady increases in research and outreach activities. During the 2016 fall semester, the College had 87 tenured and tenure-track faculty and 37 non tenure-track faculty; 2611 undergraduate students; 291 graduate students, consisting of 135 M.S. students, 156 PhD students; and $11.5M in externally funded research awards.

Mission: The College of Engineering is focused on serving the State of Nevada, the nation and the world by:

i.   Providing an outstanding state-of-the-art education for engineering and computer science graduates that prepares them to collaborate and compete in a global environment;
ii. Pursuing high quality competitively funded fundamental and applied research to create and disseminate new knowledge and innovative technologies to address the technological, societal and economic needs of the state, the nation and the world;
iii. Participating in high quality outreach activities and industrial partnerships regionally, nationally and internationally; and,
iv. Fostering a culture of respect, inclusiveness and diversity among students, faculty and staff.

Vision: The vision of the College of Engineering is to achieve measurable national recognition as a leading institution in its class. This recognition will be for the quality of its education programs, the generation of cutting-edge discoveries, the transfer of innovative technologies, and the collegiality of its faculty, students and staff.

Strategic Goals: To accomplish its mission and achieve its vision the College has set the following strategic goals:

Goal 1: Position itself as a leading college for the growth and development of the University and the higher education system of the State of Nevada;
Goal 2: Develop education, research and outreach programs that address important regional, national and international needs and position the College as a state, regional and national leader of engineering and computer science education; and,
Goal 3: Become a catalyst for the state's economic diversification and development

Strategic Objectives: To achieve these goals the College has set the following major strategic objectives:

i.   Develop a state-of-the-art accredited education program that serves the needs of the state and the nation, and equips students to become globally competitive leaders in their respective fields;
ii. Increase the number of high-quality undergraduate and graduate students;
iii. Increase the number of nationally and internationally recognized research programs by developing carefully designed, realistic and focused efforts that are aligned with the University's goal of attaining Carnegie R1 classification, the State's economic development plan and national priorities, for example, with the priorities of the National Academy of Engineering; and,
iv. Develop outreach programs that serve the needs of the State, the region, and the Nation by capitalizing on the education and research strengths of the College.

Strategic Tasks: To achieve the above set of strategic objectives, the College will pursue the following major tasks:

i.   Strategically enhance the undergraduate and graduate curricula with carefully selected programs that meet accreditation requirements and the needs of the profession, industry, state and nation;
ii.   Pursue the College of Engineering's initiative for a globally competitive engineering and computer science education;
iii. Enhance the self-assessment procedures to ensure relevance and quality of the educational and research programs;
iv.   Increase the total enrollment of undergraduate students by 15%-20% in five years;
v.   Increase admission standards at both the undergraduate and graduate levels;
vi.   Increase the number of outstanding students in the College including national merit finalists (to more than 25 in five years), presidential scholars and ACT 26+;
vii. Increase the retention rate of qualified students to exceed 90% within the University after the first year and 70% within the College of Engineering after two years;
viii. Lower the average number of years to graduate to 4.5 years;
ix.   Increase the annual number of graduates to exceed 500 after five years;
x.   Increase externally funded research in five years to exceed $20M;
xi.   Increase the PhD enrollment in five years to exceed 220;
xii. Increase the number of archival publications in five years to exceed 250 per year;
xiii. Increase the number and scope of partnerships with local and national industries;
xiv. Enhance the comprehensive recruitment and student success program;
xv.   Enhance the outreach activities of the faculty;
xvi. Increase high impact activities that contribute to economic development, such as patents and other entrepreneurial activities; and
xvii. Enhance the comprehensive public relations program that will allow the College to publicize its successes and accomplishments, regionally, nationally and internationally.

Resources needed to accomplish the tasks: The following resources are needed to accomplish the above strategic tasks:

i.   Increase the number of tenure-track positions in five years to exceed 110;
ii.   Establish endowed chairs and professorships;
iii. Increase the number of department and college support staff;
iv.   Increase the resources needed to recruit top-caliber undergraduate students by providing competitive scholarships and incentives;
v.   Increase the number of teaching assistantships, establish competitive graduate fellowships to recruit qualified MS and PhD students, and dedicate resources to successful recruitment efforts;
vi.   Increase discretionary funds to support faculty activities and programs of excellence;
vii. Increase available funds for the purchase and maintenance of state-of-the-art equipment; and
viii. Refurbish existing laboratory and office space and/or provide new space to meet the demands of a growing College, a changing curriculum, and an expanding research portfolio.

Strategies to accomplish tasks and generate resources: The following major strategies will be used to accomplish the strategic tasks and generate resources:

i.   Optimize all aspects of the management and operation of the College in order to complete the maximum number of strategic tasks within the resources currently available;
ii.   Collaborate with the University to facilitate the establishment of partnerships with industry and technology transfer;
iii. Pursue multidisciplinary and multi-institutional competitive research efforts;
iv.   Engage in a carefully designed and comprehensive Development Program involving the leadership and of the University and College, and its faculty;
v.   Explore the utilization of resources generated by overhead and development to develop plans for growth and work with the University leadership to implement them;
vi.   Continue fundraising efforts to complete the engineering complex.