Mohammad Humayon Qayoumi is the 28th president and a professor of electrical engineering at San José State University. He holds a bachelor’s in electrical engineering from the American University of Beirut and four degrees from the University of Cincinnati: a master’s in nuclear engineering, a master’s in electrical and computer engineering, an MBA and a doctorate in electrical engineering. He has also published eight books, and more than 100 articles as well as several chapters in various books. He is a licensed professional engineer and a certified management accountant.

Qayoumi served as president of California State University East Bay from 2006 to 2011. He came to Cal State East Bay from California State University Northridge, where he served as vice president for administration and finance and chief financial officer from 2000 to 2006, and was also a tenured professor of engineering management. He has over 32 years of engineering and administrative experience in several universities. Qayoumi also served as an engineer on a variety of projects in the United Arab Emirates and Saudi Arabia. He has made presentations at numerous conferences across the United States and in 10 other countries.

A senior member of the Institute of Electrical and Electronic Engineers (IEEE), Qayoumi has served as a Malcolm Baldrige National Quality Award examiner and senior examiner from 2000 to 2003. He also was a senior examiner for the Missouri Quality Program from 1997 to 2000.

Qayoumi has served his native country in various financial capacities. He was the senior advisor to the minister of finance of Afghanistan from 2002 to 2005 and remains on several boards of directors, including that of the Central Bank of Afghanistan.

A senior fellow with California Council on Science and Technology (CCST), Qayoumi is also a member of several local boards including the Bay Area Council, the Bay Area Council Economic Institute, the Silicon Valley Leadership Group, Joint Venture Silicon Valley, KQED, the Commonwealth Club, Blue Shield of California and California STEM Learning Network.

Qayoumi has been married for 33 years to Najia Karim.
Our Future Common Path

Inauguration ceremonies in American universities date back to the 17th century as a formal induction to the office and as a rite of passage. The roots of the word inauguration come from the Latin word "auguratio" meaning to predict the future by reading signs, or by interpreting patterns in nature, as was customary in ancient Roman times.

Today, given the tumultuous and fast-paced environment that we live in, anticipating the future is increasingly difficult. All we can say with confidence is that change is constant, endemic and necessary. Thus, the best way to predict the university's future is to create it ourselves. The role of a university president is to celebrate and preserve the covenant of the institutional tradition, while simultaneously serving as an effective leader for transformational change.

Since a university's traditional values serve to guard the status quo, the president is expected to be ambidextrous, in a sense, and maintain a delicate balance between the covenants of tradition, on one hand, and the transformation inherent within a community of diverse and dynamic individuals on the other hand. A world-class university will always hover between the states of being and becoming. As Benjamin Franklin stated, "When you're finished changing, you're finished." I, for one, am an optimist and believe that we are just getting started.

I have reason to believe that I am not alone in my optimism. Last fall, 49 town hall sessions were conducted with the hope that everyone in the campus community would share their aspirations for the future of the university. The campus input was analyzed, and the results were coalesced into guiding principles and strategic goals called Vision 2017. The principles acknowledge that San José State has a strong and unique sense of place, both physical and virtual, and that we endeavor to create a welcoming environment that fosters a sense of belonging and Spartan pride. Further, we acknowledge that San José State is an innovative, engaged learning community committed to preparing students with adaptive skills and knowledge for a global 21st century. The five strategic goals are: Spartan Pride; Unbounded Learning; Helping and Caring; Agility through Technology; and 21st Century Spaces. The unifying theme among these goals is the relentless pursuit of our students' success. Thus, our efforts focus on creating genuine learning experiences for our students by creating a robust, vibrant and healthy open learning ecosystem.

Vision 2017 Goal #1: Spartan Pride

Our Spartan Pride is built on a tradition of rigor, relentless intellectual curiosity, innovation, hard work, agility and a strong entrepreneurial spirit. A few examples that come to mind related to Spartan Pride include the tremendous growth in student involvement with the number of student organizations and the fraternity and sorority communities. Let me name one of our students who embodies our concept of Spartan Pride: JD Leadam. He won first place in the Silicon Valley Innovation Challenge this past December for his idea for a reusable, biodegradable water bottle made of a renewable resource, namely industrial hemp. Another example is Professor Eugene Cordero, who is breaking new ground on how to teach the earth sciences to youths with the Green Ninja project. Dr. Cordero has also been named a Google Science Communication Fellow. In short, the aim of Spartan Pride is to develop vibrant, safe and welcoming communities that create a sense of belonging and common endeavor.

The German sociologist Max Weber developed two models for communities. The first one he called "Gessellhaft," which describes a relationship based on contractual arrangements that connect individuals with institutions through a set of defined roles and obligations. While this model identifies an important legal relationship, it falls short of describing the more intimate and powerful relationships that we all have with the university.

Weber’s second model, "Gemeinschaft," defines a community with a sense of belonging, solidarity and common purpose. It is this latter model that describes our individual and collective roles in pursuit of a shared vision. But the ideal is a simultaneous integration and embrace of both models, for in this our individual roles in nurturing the spirit of community become evident. The amalgamation of these models is my aspiration for San José State, and I ask that it be yours as well. Further, it is important to build a sense of belonging commingled with a deep respect for diversity. This will generate an environment that stimulates learning, entrepreneurial endeavor and scholarship.

Vision 2017 Goal #2: Unbounded Learning

Our Spartan Pride is connected to our commitment to unbounded learning. The core functions of a university are education, research and the pursuit of new knowledge. These functions, by their nature, imply change. A university’s essential mission is one of transformation, i.e., transformation of the society it serves, the knowledge it seeks and transformation of the institution itself.

The need for such educational institutions, ones based on progressive notions of transformation and democratic exchange, was eloquently noted in 1779 by Thomas Jefferson when he described the importance of a national aristocracy of talent “without regard to wealth, birth or other accidental condition or circumstances” and “rendered by liberal education ... able to guard the sacred deposit of the rights and liberties of their fellow citizens.” Similarly, John Dewey advanced the notion that democracy is a learned activity. Since then, our society has become more complex and the demands and expectations placed upon the university have grown tremendously. But one thing remains: In today’s society, the public university still plays a vital role in shaping our democracy. Moreover, the university is critical to social and economic mobility. Universities enhance our quality of life and build thriving communities. The public university really is for the public good. San José State students are making history and changing the world. The Olympics would not be the same without Yoshihiro Uchida. You cannot talk about 1968 without mentioning Tommie Smith and John Carlos’ raised fists at the Olympics. Peter Ueberroth was the architect of the 1984 Summer Olympic Games in Los Angeles and was voted 1984 Man of the Year by Time magazine. Theatre and Chicano studies have been influenced by the work of Luis Valdez.

Fried four new species of deep sea sharks, which is critical to preserving biodiversity, the bedrock of healthy ecosystems. There are many more examples too numerous to mention. Together we must not only honor our past but also collectively create a bright future for our university, our region and beyond. Situated in this cradle of creativity, in this epicenter of innovation, our success will only be limited by our imagination.
The roots of a Western liberal education, dating back to the 17th century, are anchored in the trivium and quadrivium that is comprised of the seven competencies: grammar, rhetoric, logic, arithmetic, geometry, music and astronomy. Coursework in the arts and humanities, in particular, teach critical and contextual thinking skills, ethics, civic responsibilities and communication competencies for all students, especially those in the applied professions. The arts and humanities also give students the underpinnings for responsible citizenship as well as greater career opportunities. Art enables us to escape the limitations in nature and empowers us to seek change through our imagination. It addresses permanent human concerns. Art is our fingerprint in the world. Art connects humans with their humanity.

Liberal education sharpens our judgment and builds our capacity for innovation. The individuals who can successfully manage ambiguity and are still able to make effective decisions in the face of chaos and incomplete information will be more successful in life than those who cannot. A liberal arts education enables one to take calculated risks, make intelligent choices and critically assess complex situations with flexibility without losing focus. The temperament and outlook acquired through a liberal education helps us see possibility in the face of adversity and helps us aspire to the highest of ideals with passion and commitment. Finally, a liberal education gives one a sense of social responsibility, the competency to apply knowledge and the capability to recognize systemic patterns.

In recent times, there has been a rise in the importance of science, technology, engineering and mathematics—otherwise known collectively as STEM. As with the arts, humanities and social sciences, obtaining STEM skills is also very critical for every college graduate. According to the Carnegie Foundation, “Mathematics and science are essential components of a liberal education, the backbone of logic and analytic thinking from early childhood through the most advanced levels of learning across the academic disciplines. Science, technology, engineering and mathematics enable us to understand the natural world, the built environment, systems of society and the interactions among them that will determine the future of our planet.”

Unfortunately, the STEM competency of students in the United States is one of the lowest among all developed nations. Over the next 10 years, five out of eight new jobs and eight out of the 10 highest paying positions in the U.S. will be in STEM-related careers. Thus, many experts advocate a deeper and more effective integration of STEM as part of a liberal education. Other critical proficiencies that students need include imaginative problem solving, social dexterity and the ability to connect seemingly unrelated sets of ideas in order to discover new insights. Students, therefore, should have ample opportunities to experience real-life problems and challenges. That is where internships and service learning can serve as effective educational vehicles. Such programs help students build character, social responsibility and citizenship, skills that will serve them for the rest of their lives.

San José State needs to offer more interdisciplinary courses and programs. For the sake of our students, the foundation of our educational efforts must become interdisciplinary. One recent example of the importance of interdisciplinary collaboration is Dr. Kevin Jordan’s leadership in receiving a historic $73 million grant from NASA Ames for Collaborative Human Systems Integration Research. Dr. Jordan is a faculty member in the psychology department. Many think of his work as space and science, when it’s really human thinking, sensation and mental information processing.

E-learning is another essential educational aspect for the future. E-learning fosters higher student achievement, improves critical thinking skills and increases career opportunities for students. However, adequate IT skills are a prerequisite for e-learning. That is why students must have the opportunity to develop increasingly complex technological competencies to successfully maneuver their way through today’s world.

In recent years, the economic cost of distributing information has almost disappeared. For instance, iTunesU has more than 150,000 lectures, presentations, videos and podcasts available on an all-mobile platform. The MIT OpenCourseWare initiative celebrated its 10th anniversary last year, with more than 13,000 MIT courses available in several languages and at no cost to anyone around the globe. The open courseware movement sparked similar initiatives in more than 200 institutions around the world. Some of the major ones in the U.S. include: Carnegie Mellon Open Learning Initiative, Harvard Medical School’s MyCourses, Open Yale Courses, Stanford Engineering Everywhere, etc. Consequently, the world has moved from a scarcity of knowledge to a level of abundance. The university’s monopoly on content is a thing of the past and the university’s role in merely distributing content has diminished profoundly. The rapid proliferation and access to knowledge by anyone at anytime anywhere creates a fundamental shift in the traditional role of universities.

The availability of information has been a fundamental value of higher education. Nurturing and promoting a culture of openness as a core organizational competency is more important today than it has ever been in the past. In short, openness will be a determining factor as to whether a university can remain relevant not only to learners but also to society as a whole. Building an infrastructure that supports access to open educational tools and resources will greatly enrich student learning opportunities and improve innovation. The five key elements of an Open Learning Ecosystem are that it:

- One: Requires innovative methods of teaching and learning.
- Two: Accommodates a very broad mixture of learning providers.
- Three: Removes the old divides between formal education and informal learning.
- Four: Uses transparent and strategic technologies where appropriate.
- And Five: Offers and delivers learning that is social, contextual and continuous.

Given recent technological advances, coupled with the unfortunate decline of state support for public education, the university sits in a position of real opportunity. We have to rethink, reimagine and reengineer teaching, learning and educational delivery systems. We have the opportunity to take the highest ideals of the liberal arts university into the global 21st century, and build the underlying infrastructure for a future of unbounded learning.

**VISION 2017 GOAL #3: HELPING AND CARING**

To achieve the desired educational outcome for our students, as a university community we must build a culture of helping and caring. Genuine commitment is the prerequisite for realizing a culture of caring. Fostering a caring culture requires maintaining the delicate balance between being a value-based and outcome-based
organization. Similarly, it is based on an obligation to assist both individuals and the organization in achieving their respective objectives.

The university’s culture of helping and caring must extend beyond the physical boundaries of the university as we define our role within the region, state, nation and the world. One example of this is CommUniverCity, led by Professor Dayana Salazar, which has delivered over 100,000 hours of voluntary community service to the adjoining neighborhoods around the university. The importance of urban areas to the nation’s economic vitality cannot be denied. The Brookings Institution found that the largest one hundred metropolitan regions in the U.S. constitute one-eighth of the nation’s land mass but account for two-thirds of the population and three-quarters of the economic activity. It behooves San José State to develop meaningful and long-term connections with our surrounding urban area. The trend toward more urbanization is increasing at a global level. According to a McKinsey report, by 2025 the top 600 world cities will have a population base of two billion, or 25 percent of the world’s population, and will generate $64 trillion, or 60 percent of the world’s GDP. The competency to be globally savvy must become one of the requirements of college education. The idea of helping and caring, thus, starts within the university, but then must expand beyond the university’s borders to encompass the surrounding area and indeed the globe.

VISION 2017 GOAL #4: AGILITY THROUGH TECHNOLOGY

While the tasks of unbounded learning and of helping and caring are daunting, we are aided by new technologies that can make us more agile. Never before in higher education has technology provided such important challenges as well as opportunities. According to the Gartner’s review on the proliferation of technology:

- Roughly 90 billion pieces of content were added to Facebook in just one month.
- More than 32 billion searches were done on Twitter in a month.
- The average teenager sends more than 4,700 text messages per month.
- And more than two billion videos are watched on YouTube on a daily basis.

In addition, context-aware applications will become more prevalent and will enhance the quality of interaction for end users. According to EDUCAUSE, “Technology can now harness three new superpowers to drive exponential improvement in human capability in education: telepathy, total recall and communication with perfect fidelity.” The same issue stated the impact of technology on higher education as:

- One: “Education will never be the same.”
- Two: “Information technology can and should disrupt entrenched processes and facilitate new and better ways of working.”
- And three: “The future of technology in higher education will be determined less by the technologies themselves and more by the leaders guiding the strategic use of these technologies.”

In the past decade, we can see how technology has impacted many established sectors. For instance, how broadcast TV has been challenged by viral videos, newspapers by blogs, stores by retail commerce and photography by digital cameras. In the words of José Ferreira, founder and CEO of education startup Knewton: “The Internet disrupts any industry whose core product can be reduced to ones and zeros,” and relating the Internet to education, he believes, “is the biggest virgin forest out there.”

These new technological developments offer new opportunities for San José State to improve organizational responsiveness and eliminate procedural obstacles through an advanced technology infrastructure. This can be achieved by building competencies and program delivery in areas such as: big data, gesture-based computing, information analytics, cloud security, mobile and immersive computing, content ecosystems, intelligent infrastructure and analytics for collaborative decision-making. Finally, technology must be utilized strategically to transform the learning process and propel increased innovation.

VISION 2017 GOAL #5: 21ST CENTURY SPACES

The viral proliferation of technology, especially for the younger generation, has given rise to a concept called “attention economy.” As stated by Nobel Laureate Herbert Simon, what information consumes is rather obvious. It consumes the attention of its recipients. Hence, a wealth of information creates a poverty of attention. This implies that the power is no longer in the hands of those who control the channels of distribution. The power is now in the hands of those who control the limited resource of attention. This insight must play a key role as we envision the 21st century spaces at San José State. As Diana Oblinger puts it:

“Learning is much more than accessing content. In the 21st century, learning is a complex blend of skills, competencies and the will to continue learning throughout life. These skills and competencies include the ability to think critically and solve complex problems, work collaboratively, communicate effectively and pursue self-directed learning or metacognition.”

The traditional lecture-based classroom has created a new form of separation. Many students who are tech-savvy and have developed habits of utilizing technologies very effectively in many other aspects of their lives are forced to regress to an analog, low-tech environment when attending class. This is a growing factor in the reduction of the level of engagement and participation for these groups of students.

The type of learning spaces we create in the future can ameliorate or exacerbate this divide. To enhance student engagement and effectiveness in the learning process, we must drastically reduce traditional lecture as a form of education delivery. Instead, we need to build virtual educational spaces to which students have access on a 24/7 basis from anywhere. But it is important to keep in mind that while we will improve our virtual spaces, we will not sacrifice community. In fact, we seek to expand and enhance our definition of community.
Our great nation was established based on grand ideas and ideals. We must seek creative ways to marshal that pioneering spirit, the unwavering belief in personal freedom, the incandescent passion for enlightened self-interest and our deep commitment to regional stewardship.

The recent economic calamity that everyone has experienced will serve as a reset after which new technologies, paradigms and systems will fundamentally reshape the economic landscape. In this era, universities that serve urban communities, like ours, have the opportunity to become prime movers of new and innovative ideas that will propel our economy forward. We must have the audacity of imagination and the courage of commitment to look ahead into the future with a resolute sense of urgency, purpose and destiny, despite the challenges of our times.

Along this journey we will surely face setbacks and roadblocks. There will be situations in which everyone may not agree with every tactical decision. But we will continue to listen to all key stakeholders, be open and transparent in our decision processes and state differences with enlightened candor. This is the only way we can continue to transform this great university—step by step, block by block and brick by brick.

Colleagues and friends of San José State, let us ask ourselves: What kind of a university do we want to leave for those who will follow us? What progress must we make to open the doors of opportunity for our current and future students? Let us reclaim the Spartan spirit that founded this great university in 1857. Let us reaffirm our commitment to the principles of public higher education.

So let us begin a new spirit of commitment and engagement whereby the colossal financial challenges of today will dwarf in comparison to our collective resolve and tenacity. The strength of any organization is best demonstrated in the face of adversity. We must conquer the collective fear created by the uncertainty of the present global financial tumult and continue to build on our sense of common purpose. Our future success will build on the unbounded exuberance of our diverse student body, the strong courage of our faculty in its unwavering pursuit of excellence in teaching, learning, creative activities and traditional research, and the genuine dedication of our staff in serving the university.

Colleagues and friends of San José State University, I urge you to join me in making sure that the university’s best days are ahead. As we celebrate the vitality and vivacity of this great institution, we must affirm our reliance in building human energy. Let us continue the journey together in pursuit of our shared vision of San José State as a world-class institution of higher learning and an exemplary regional steward. Let us collectively define San José State as:

- A place of globally savvy visionaries.
- A cradle of creativity and epicenter for innovation.
- A home for dreamers, innovators and high achievers.
- And a place that epitomizes Silicon Valley’s magic.
References


