

School of Engineering Dean Search

Academic Year 2016-2017

Job Description & Institutional Profile

Chaouki Abdallah, Ph.D.
Provost/EVP for Academic Affairs, Hiring Official

Julie Coonrod, Ph.D.
Dean of Graduate Studies, Search Chair



SEARCH COMMITTEE

Hiring Official

Chaouki Abdallah, Provost and Executive Vice President for Academic Affairs, Professor of Electrical & Computer Engineering

Search Committee Chair

Julie Coonrod, Dean of Graduate Studies, Professor of Civil Engineering

Search Committee Members

Dorian Arnold, assistant professor of computer science

Abhaya Datye, Chair and Distinguished Professor, Chemical and Biological Engineering

Michael Devetskiotis, Chair, Electrical and Computer Engineering

Edward David Blandford, assistant professor of nuclear engineering

John Chavez, president, New Mexico Angels

April Davidson, academic operations officer, School of Engineering

Daniel Feezell, assistant professor of electrical and computer engineering

Sang Han, professor of chemical and biological engineering and director of the Nanoscience and Microsystems program

Larry Larrañaga, New Mexico House of Representatives, alumnus

Fernando Moreu, assistant professor of civil engineering

Svetlana Poroseva, assistant professor of mechanical engineering

Wendy Stires, associate vice president of principal giving and regional development, UNM Foundation

Search Coordinator

Jennifer Rose Love, Program Planning Officer, Office of the Provost

Committee Contact Information

The University of New Mexico

Scholes Hall

MSC 05 3400

1 University of New Mexico

Phone: (505) 277-2254

Email: engdeansearch@unm.edu

Website <http://engdeansearch.unm.edu/>

Press Release

UNM to conduct national search for dean of engineering

August 4, 2016

University of New Mexico Provost Chaouki Abdallah has announced the launch of the search for a new dean of the School of Engineering, who would hold the title of Jim and Ellen King Dean of Engineering and Computing.

Julie Coonrod, dean of Graduate Studies and professor of civil engineering, has been appointed chair of the search committee.

The selected candidate will take over leadership of the School from Joseph L. Cecchi, who has held the dean position since 2014 and previously from 2000-2009.

The newly-endowed position — the only endowed deanship at UNM — offers the opportunity for an experienced and energetic visionary to lead the School of Engineering, continuing the efforts in excellence in research and scholarly achievement at national and international levels. The individual will have an articulated vision for the School, as well as demonstrated leadership ability, including excellent communication, negotiation, promotion, and problem-solving skills.

The dean, who reports to the provost and executive vice president for academic affairs, is the primary academic and administrative officer of the faculty of the School of Engineering. The dean will assume a central leadership role in continuing development of the School of Engineering's disciplines toward national and international excellence with a solid commitment to research and teaching. The dean is responsible for advancing and promoting the School in areas of instruction, research, fiscal management, development, and personnel.

The dean manages an annual academic budget of approximately \$17 million and the administration of the departments of Chemical and Biological Engineering; Civil Engineering; Computer Science; Electrical and Computer Engineering; Mechanical Engineering; and Nuclear Engineering, as well as oversight of six research centers: the Center for Biomedical Engineering; the Center for Emerging Energy Technologies; COSMIAC, Manufacturing Training and Technology Center, the Institute for Space and Nuclear Power Studies, and the Center for Water and the Environment. In fiscal year 2016, the School had \$32.9 million in total annual research expenditures.

Applications are now being accepted through [UNM Jobs](#). For best consideration, applications should be submitted by Oct. 3, 2016. Applications will be received until the position is filled. This is a full-time faculty executive position with a preferred start date of July 1, 2017.

The search committee includes the following members of the UNM and local community:

- Julie Coonrod, dean, Graduate Studies, and professor, Department of Civil Engineering, search committee chair
- Fernando Moreu, assistant professor, Department of Civil Engineering
- Dorian Arnold, assistant professor, Department of Computer Science
- Abhaya Datye, Chair and Distinguished Professor, Chemical and Biological Engineering
- Michael Devetsikiotis, Chair, Electrical and Computer Engineering
- Edward David Blandford, assistant professor, Department of Nuclear Engineering
- John Chavez, president, New Mexico Angels
- April Davidson, academic operations officer, School of Engineering

- Daniel Feezell, assistant professor, Department of Electrical and Computer Engineering
- Sang Han, professor, Department of Chemical and Biological Engineering, director of Nanoscience and Microsystems program
- Larry Larrañaga, New Mexico House of Representatives, alumnus
- Fernando Moreu, assistant professor, Department of Civil Engineering
- Svetlana Poroseva, assistant professor, Department of Mechanical Engineering
- Wendy Stires, associate vice president of principal giving and regional development, UNM Foundation

For more information on the position, refer to the [search website](#). Questions related to the search should be directed to the search coordinator Jennifer Rose Love at engdeansearch@unm.edu.

Sincerely,



Chaouki T. Abdallah, Ph.D.
Provost and Executive Vice President for Academic Affairs
Professor of Electrical and Computer Engineering

JOB DESCRIPTION

Position Summary

The University of New Mexico invites applications and nominations to the position of the Jim and Ellen King Dean of Engineering and Computing. This experienced and energetic visionary will be a distinguished intellectual leader for the School of Engineering, with demonstrated excellence in research and scholarly achievement at national and international levels. The Dean will have a passion for research, innovation, and student success and will inspire faculty, collaborators, key stakeholders, alumni, and donors to share in this vision for the School to continue to make a strong and lasting imprint in high-caliber research, as well as the economic development of the state of New Mexico and beyond. The Dean will oversee the School of Engineering's nearly 100 tenured and tenure-track faculty in six academic departments: Chemical and Biological Engineering; Civil Engineering; Computer Science; Electrical and Computer Engineering; Mechanical Engineering; and Nuclear Engineering. Among the internationally-recognized centers associated with the School are the Center for High Technology Materials, the Center for Microengineered Materials, the Center for Advanced Research Computing, the Center for Biomedical Engineering, the Center for Emerging Energy Technologies, the Configurable Space Microsystems Innovations & Applications Center, and the Center for Water and the Environment. The School has extensive collaborations with the three federal laboratories in New Mexico: Sandia National Laboratories, Los Alamos National Laboratory, and the Air Force Research Laboratory. Several researchers at the three laboratories hold joint faculty appointments in the School, including two senior Sandia employees who are tenured members of the School's faculty. The School of Engineering academic budget is nearly \$17M, with annual research and contract expenditures of \$32.9M. The School enrolls approximately 2,400 undergraduates and 850 graduate students and is committed to diversity with several externally-funded programs encouraging women and underrepresented students in science and engineering. Through STC.UNM, the university's technology-transfer office, faculty and students in the School have been actively involved in generating intellectual property, issuing 220 patents and creating 44 startups just in the last decade.

Duties and Responsibilities

The Dean, who reports to the Provost and Executive Vice President for Academic Affairs, provides academic and administrative leadership to the School of Engineering. As the primary academic and administrative officer of the faculty of the School of Engineering, the Dean will assume a central leadership role in continuing development of the School of Engineering's disciplines toward national and international excellence with a solid commitment to research and teaching. The Dean is responsible for advancing and promoting the School in areas of instruction, research, fiscal management, development, and personnel.

Minimum Qualifications

- Earned Ph.D. in Engineering or Computer Science, or a doctoral degree in a related discipline.
- Distinguished record of accomplishment and credentials that merit appointment at the rank of tenured full professor in an academic department of the School of Engineering at the University of New Mexico.
- Three years of management and administrative experience at the level of department head, chair, research director, center director, dean, or the equivalent.

Preferred Qualifications

- Articulated vision for the University of New Mexico - School of Engineering.
- Demonstrated leadership ability including excellent communication, negotiation, promotion, and problem solving skills.
- Record of managerial abilities including effective fiscal management of large complex budgets along with human and physical resource management.
- Demonstrated commitment to academic excellence at both the undergraduate and graduate levels.
- Demonstrated commitment to research excellence at both the undergraduate and graduate levels.
- Ability to obtain philanthropic support for education and research activities from individuals, corporate, and private foundations.
- Evidence of work or collaboration with industry, government, and private sector institutions, and ability to increase those levels of collaboration.
- Commitment to diversity, equity, inclusion, student success and working with broadly diverse communities.

How to apply

Applications should be submitted online through [UNM Jobs](#) by referencing posting 0835510. For best consideration, applications should be submitted by October 3, and the position is open until filled. Nominations can be submitted electronically to engdeansearch@unm.edu.

A complete application consists of (1) a letter (not to exceed 8 pages) expressing the candidate's interest and specifically addressing each of the preferred qualifications for the position as described above, (2) a current curriculum vitae/résumé, (3) and the names, positions, e-mail addresses, and telephone numbers of at least five professional references. Please note that references will only be contacted after express permission from the applicant is obtained but reference contact information is required to complete the application. UNM's confidentiality policy ("Recruitment and Hiring," Policy #3210), which includes information about public disclosure of documents submitted by applicants, is located at <http://www.unm.edu/~ubppm>.

UNIVERSITY LEADERSHIP

Robert G. Frank, President

Web Address: <http://president.unm.edu/about/index.html>

Strategic Plan: <http://unm2020.unm.edu/index.html>



Dr. Frank is the 21st President of The University of New Mexico. Prior to coming to UNM he was the Provost and Senior Vice President for Academic Affairs at Kent State University and Professor in the College of Public Health and the Department of Psychology from 2007-2012. During his tenure at Kent State, the University established a college of Public Health, increased enrollment by 23%, increased retention by 4%, and revised promotion and tenure rules.

Prior to his appointment at Kent State, Dr. Frank was the Dean of the College of Public Health and Health Professions at the University of Florida in Gainesville (1995-2007) where he also served as a Professor in the Department of Clinical and Health Psychology. During his tenure at the University of Florida, the College established was reorganized as a College of Public Health and accredited by the Council on Education for Public Health. In 2010, an endowed chair, the Robert G. Frank Professorship, was created by Jackie and Dan Devine to honor Dr. Frank. From 1979 to 1995, Dr. Frank served on the faculty in the School of Medicine at the University of Missouri at Columbia. During this time, he was also appointed a Robert Wood Johnson Health Policy Fellow at the Institute of Medicine, National Academy of Sciences serving in the office of Senator Jeff Bingaman (D-New Mexico), worked on federal and state health policy as the Assistant to the School of Medicine's Dean for Health Policy, and directed Missouri's state health reform effort—the ShowMe Health Reform Initiative.

Dr. Frank's honors and awards include appointment in 2011 by the U. S. Department of Defense to the Defense Health Board, a federal advisory committee to the Secretary of Defense. He is board certified as a Diplomate in Clinical Psychology from the American Board of Professional Psychology, is Past President of the Division of Rehabilitation Psychology of the American Psychological Association and is a Fellow in Rehabilitation Psychology, Clinical Psychology, and Health Psychology. Dr. Frank formerly chaired the Florida Developmental Disabilities Council, the Legislative Committee of the American Congress of Rehabilitation Medicine, and the American Psychological Association's Committee on Professional Continuing Education and its Board of Educational Affairs. Dr. Frank's research areas of interest are in psychological adjustment to catastrophic injury and health policy.

President Frank's Achievements at UNM

UNM has come a long way since President Frank began in June of 2012. Those successes have been a result of debate, deliberation, inclusion and testing some uncharted waters, and most have been shaped by the UNM2020 vision plan adopted in 2013.

Some of the following accomplishments are reflective of UNM2020 in action under the leadership of President Frank:

- In 2012 UNM established the Honors College, which challenges the best and brightest students to bring an interdisciplinary perspective to their engagement with the community. The number of freshmen enrolled in the Honors Program in the Fall of 2012 was 350. Enrollment in the Honors College was more than 600 in Fall 2013.
- President Frank spearheaded the Innovate ABQ initiative, which brings together the research power of the state's flagship university with Albuquerque's entrepreneurial and established business community to create new companies, grow existing ones and attract more out-of-state business. As one of UNM's most significant recent achievements, this venture has received overwhelming support and commitment from both public and private partners, who have made a combined investment of \$7.5 million dollars.
- UNM spaces and buildings are being designed for optimal learning experiences, such as the Math MaLL and Collaborative Teaching and Learning Building. UNM has also invested in a "center for teaching excellence" to explore even better ways of teaching and learning.
- President Frank stated early on that by 2020 we want 100% of our students to have some form of international experience, including internationalization at home. In 2013, he established the Global Education Office, and since then, UNM has increased the number of incoming international students on campus by 13 percent and UNM students who study abroad by 8 percent.
- In response to the determination that UNM's organizational structure and budget environment needs a more straightforward and simple budgeting model to ensure the transparency and results, President Frank announced the decision to create a Results Oriented Management (ROM) budget process in 2013.
- In 2014, President Frank announced a refresh of UNM's comprehensive campaign, Changing Worlds 2020: The Campaign for UNM, which has raised over \$82 million dollars. Building on the UNM 2020 goals, and folding in the current campaign results, he set a new goal of \$1 billion in private support by the end of 2020.

Dr. Chaouki T. Abdallah, Provost and Executive Vice President for Academic AffairsWeb Address: <http://provost.unm.edu/>

Chaouki T. Abdallah obtained his BE from Youngstown State University in 1981, and his MS and Ph.D. in Electrical Engineering from the Georgia Institute of Technology in 1982 and 1988, respectively. He joined the Department of Electrical and Computer Engineering (ECE) at the University of New Mexico (UNM), where he is currently professor of electrical and computer engineering. Between 2005 and 2011, he was the ECE department chair and became the provost and executive vice president of academic affairs of UNM on July 2011, a position he currently holds. Abdallah was the first recipient of ECE's Lawton Ellis Award for combined excellence in teaching, research, and student/community involvement.

Abdallah also received the School of Engineering senior research excellence award in 2004, and was the ECE Gardner Zemke Professor between 2002 and 2005. He served as director of ECE's graduate program from 1999 through 2005. Dr. Abdallah was a visiting professor at the Università Degli Studi di Roma, Tor Vergata, Rome, in 2005. He has published eight books (three as co-editor and five as co-author) and more than 300 peer-reviewed papers. His PhD students hold academic positions in the United States and in Europe, and senior technical positions in various U.S. national laboratories.

Abdallah conducts research and teaches courses in the general area of systems theory with focus on control, communications, and computing systems. His research has been funded by NSF, AFOSR, NRL, national laboratories, and by various companies. He has also been active in designing and implementing various international graduate programs with Latin American and European countries. He was a co-founder in 1990 of the ISTECON consortium, which currently includes more than 150 universities in the U.S., Spain, and Latin America. He served as the general chair of the 2008 CDC, the premier IEEE conference in Decision & Control, which was held in Cancun, Mexico. Abdallah is a senior member of IEEE and a recipient of the IEEE Millennium medal. Abdallah is fluent in English, French, and Arabic.

Paul B. Roth, Chancellor for Health Sciences, Dean of the School of Medicine

Web Address: <http://hsc.unm.edu/about/leadership.shtml>



Paul Roth, chancellor of the University of New Mexico Health Sciences Center and dean of the School of Medicine, is recognized as a leader in emergency medicine, as an innovator in medical education and as the head of one of the nation's leading academic medical centers. Dr. Roth was among the first to form a clinic and coin the phrase "urgent care."

Dr. Roth founded UNM's Center for Disaster Medicine and created the nation's first civilian disaster medical assistance team. He was asked to head up the emergency team following the 9/11 attack on New York City. The team also deployed in Haiti following the 2010 earthquake that claimed more than 200,000 lives.

Dr. Roth served as chair of the American Association of Medical Colleges Council of Deans from 2005-2006 and remains on its administrative board. He is a recent member of the AAMC's Liaison Committee on Medical Education and chairs the standards subcommittee.

Dr. Roth served on the U.S. Department of Health and Human Services' Public Health Emergency Advisory Council, and was a member of the joint Department of Homeland Security and Department of State "Secure Borders/Open Doors" advisory committee and the administration transition task force for homeland security during the Bush administration.

Prior to heading the Health Sciences Center, Dr. Roth held a variety of leadership positions at UNM, including chair of the department of emergency medicine, director of ambulatory care programs and chief medical officer.

Dr. Roth serves as a member of the UNM Hospital board of trustees and on the UNM Science and Technology Corporation board. He also chairs the board of the Sandoval Regional Medical Center in Rio Rancho, N.M. He is the recent past chair of the Greater Albuquerque Chamber of Commerce board and in 2011 received the Chamber's Chairman's Award of Excellence.

Dr. Roth is a Fellow in the American College of Emergency Physicians. He graduated from George Washington University School of Medicine in 1976 after two years of medical school at the University of Nevada, Reno. He completed his family practice residency in 1979 at the University of New Mexico School of Medicine. He completed a BS in 1969 and an MS (biology) in 1972, both at Fairleigh Dickinson University.

Gabriel P. López, Vice President for Research

Web Address: <http://research.unm.edu>



Gabriel P. López is vice president for research at UNM. He also is a professor in the Department of Chemical and Biological Engineering.

Before coming to UNM to lead the university's research efforts in 2015, López was a professor of biomedical engineering, as well as mechanical engineering and materials science, at Duke University. He was founding director of the National Science Foundation's Research Triangle Materials Research Science and Engineering Center at Duke. In this role, he successfully led a team of researchers drawn from Duke, North Carolina State University, University of North Carolina-Chapel Hill and North Carolina Central University. Prior to his service at Duke University, López was a professor of chemical engineering and chemistry at UNM from 1993 to 2010. During his time at UNM, he served as the founding director of the Center for Biomedical Engineering beginning in 2005, and the biomedical engineering graduate programs beginning in 2008.

López has authored more than 200 peer-reviewed scientific papers and book chapters and is inventor on 32 U.S. patents. He has served as principal investigator or co-principal investigator on approximately \$46 million in grants. He is the recipient of many honors and accolades for his research, including election as a Fellow of the American Institute for Medical and Biological Engineering in 2011. In 2016, he received the STC.UNM Innovation Fellow Award in recognition of his achievements as one of the UNM's leading innovators. López is also the recipient of an Outstanding University Inventor Award from the Semiconductor Research Corporation and has earned an NSF Faculty Early Career Development Award. In 2006, the editors of *Hispanic Engineer and Information Technology* selected him as one of the "100 most important Hispanics in technology and business."

Active in the areas of biointerfacial phenomena, biomaterials, self-assembly and bioanalytical microsystems to address problems in medicine, biotechnology and environmental quality, López has been involved in technology transfer and translational activities, including the development of an anti-infection, soft robotic catheter, serving on the Scientific Advisory Board of Eta Diagnostic Inc. in Albuquerque and collaboration with several industrial partners.

López earned a bachelor's degree in chemical engineering from the University of Colorado in 1985 and a Ph.D. in chemical engineering from the University of Washington in 1991.

Elizabeth (Lisa) J. Kuuttila, President and CEO of STC.UNM

Web Address: <https://stc.unm.edu>



Lisa Kuuttila joined STC.UNM (STC), the University of New Mexico's technology-transfer program, as president and CEO in 2003. She works with the STC.UNM Board of Directors in developing strategies for implementing STC's vision to play a vital role in New Mexico's economic development and to be a leader in technology commercialization. Under her leadership, STC.UNM is substantially growing its program using the Rainforest model to develop an innovation ecosystem in New Mexico. In 2013, STC.UNM was tasked by the University with implementing its economic development initiatives under Kuuttila's leadership as CEO and Chief Economic Development Officer.

Kuuttila has more than 20 years of prior leadership experience in technology commercialization and licensing. This includes positions as Assistant Vice President for Technology Commercialization at Purdue Research Foundation; Director, Technology Commercialization, University of Georgia; and Director, Office of Technology Commercialization, Center for Advanced Technology Development, Iowa State University. Her prior experience also includes a consulting practice that provided strategic marketing and technology-transfer consulting services for a wide variety of well-known technology corporations, universities and foundations, including Stanford University. She began her career in industry in several engineering and technology-marketing positions. Kuuttila has exhibited exceptional skills in the marketing and start-up company aspects of technology commercialization, having significantly increased the number of spin-off companies at each university she has served. She also has substantial expertise in university-based equity transactions and managed the seed-capital venture fund on behalf of Purdue Research Foundation.

Kuuttila has published extensively in her field, is an active speaker and has made presentations throughout her career to many organizations, such as the Association of University Technology Managers (AUTM), the Association of University Related Research Parks (AURRP), the Licensing Executives Society (LES), and other national and international conferences and forums. Kuuttila serves on the boards of the New Mexico Angels, a private membership organization for qualified angel investors, and the Coronado Ventures Forum, a non-profit corporation focused on development, education and networking opportunities for entrepreneurs and angel and professional investors.

DEANS AT UNM

UNM Main Campus Deans	UNM Health Sciences Center Deans
Anderson School of Management Craig White	School of Medicine Paul Roth, M.D
College of Arts and Sciences Mark Peceny	College of Nursing Nancy Ridenour
College of Education Salvador Hector Ochoa	College of Pharmacy Lynda Welage, PhamD
School of Engineering Joseph L. Cecchi	
College of Fine Arts Kimberly Pinder	
Graduate Studies Julie Coonrod	
School of Law Alfred Matthewson Sergio Pareja	
University College and Honors College Catherine "Kate" Krause	
College of University Libraries and Learning Sciences Richard Clement	

INSTITUTIONAL PROFILE

New Mexico's Flagship Institution



Founded in 1889 as New Mexico's flagship institution, The University of New Mexico (UNM) occupies nearly 800 acres near old Route 66 in the heart of Albuquerque, a cultural and creative mecca of the Southwest. UNM researchers, energized and strengthened by a decades-long partnership with Sandia National Laboratories, Los Alamos National Laboratory, the Air Force Research Laboratory and other vibrant collaborations, are developing solutions to society's most pressing challenges in healthcare, national security, alternative energy, high-performance computing, and many other key areas,

injecting millions of dollars into New Mexico's economy through technology transfer leading to the creation of new businesses. The University is a partner in Innovate ABQ, an economic revitalization initiative to strengthen the economic base of Albuquerque and the state. UNM is a Carnegie Very High Research University and a federally-designated Hispanic-serving Institution and serves a diverse student population of nearly 35,000 on five campuses (approximately 28,000 at its Albuquerque main campus). The University operates on a budget of \$2.85 billion of which over \$350 million is derived from research and sponsored projects. The budget supports approximately 15,000 full- and part-time employees and over 200 undergraduate and graduate programs. UNM is a member institution of the WERC-A Consortium for Environmental Education & Technology Development.

UNM has branch campuses in Gallup, Los Alamos, Taos and Valencia County, plus UNM West, an extension campus in Rio Rancho. UNM offers bachelor and graduate degree completion programs throughout the state via Extended Learning and has education centers located at the four branch campus locations as well as in Santa Fe, Farmington, and at Kirtland Air Force Base. UNM's libraries, museums, galleries and performance spaces are a rich cultural resources for the state. Home to the Lobos and contenders in the Mountain West Conference, UNM athletics draw fans from all over. The University Arena or "The Pit" is one of college basketball's most famous and recognizable buildings. In fact, The Pit was ranked 8th by USA Today as one of the best arenas to watch college basketball.

The UNM Community

In Fall 2012, UNM campuses served 36,722 students, employed 3,995 faculty, 6,551 staff, and 5,061 students (an additional 6,116 staff work at University Hospital, 66 at the UNM Foundation, and 268 at the UNM Medical Group); and had a total operating and capital budget of about \$2.43 billion. In the previous academic year, UNM awarded 5,647 degrees and certificates. The Division of Continuing Education and Community Services serves more than 30,000 students annually, the services available include various non-credit or certificate courses, workshops, and training sessions. There are more than 159,000 active alumni, with Lobos in every state and more than 1,400 alumni outside the U.S. More than half of UNM's alumni choose to remain in New Mexico.

The Health Sciences Center is the state's largest integrated health care treatment, research and education organization. U.S. News and World Report's 2015 edition of "America's Best Graduate Schools" ranks the UNM School of Medicine 40th in primary care and 83rd in research, while specific areas also rank again among the top 10 – rural medicine, second, and family medicine, ninth. Additionally, in health disciplines, UNM's nursing/midwifery program is ranked fifth. UNM School of Law is ranked 72nd, while ranking ninth in clinical training. UNM College of Fine Arts is ranked 53rd, with its photography program ranked fifth in the nation. The engineering program is ranked 87th nationally, with electrical engineering coming in at 53rd, and chemical engineering ranking at 58th.

UNM is a place where cutting-edge research and creative endeavors flourish. UNM research injects millions of dollars into New Mexico's economy, funds new advancements in healthcare, and augments teaching – giving students valuable hands-on training in state-of-the-art laboratories. UNM is one of a handful of Hispanic-Serving Institutions in the U.S. that is also classified as a Carnegie Research University with Very High Activity. Recently, Hispanic Business Magazine ranked four University schools among the top 10. The list included: UNM School of Law, seventh; UNM Anderson School of Management, fourth; UNM School of Medicine, seventh; and the UNM School of Engineering, sixth.

UNM's Mission, Values, Goals

UNM's statement of mission articulates our highest purposes for existing: The mission of the University of New Mexico is to serve as New Mexico's flagship institution of higher learning through demonstrated and growing excellence in teaching, research, patient care, and community service.

UNM's ongoing commitment serves to:

- Educate and encourage students to develop the values, habits of mind, knowledge, and skills that they need to be enlightened citizens, contribute to the state and national economies, and lead satisfying lives.
- Discover and disseminate new knowledge and creative endeavors that will enhance the overall well-being of society.
- Deliver health care of the highest quality to all who depend on us to keep them healthy or restore them to wellness.
- Actively support social, cultural, and economic development in our communities to enhance the quality of life for all New Mexicans.

UNM 2020 STRATEGIC PLAN

A View to the Horizon

During 2012, the UNM community undertook the process of envisioning a desired future state (2020) to serve as a descriptive mesa in the distance toward which plans and actions strive. An open and inclusive process engaging more than one thousand stakeholders in live and virtual sessions produced attributes reflective of UNM in 2020. These attributes are not an absolute commitment to do one thing or another, but rather capture what the UNM community seeks in the ideal world, regardless of the feasibility. The Goals and Objectives give specificity to commitments and actions taken in pursuit of UNM2020.

A View to the Horizon

STUDENTS: THE LOBO EXPERIENCE

- Mass Customization for Student Success
- Renowned Honors College & Superior Degree Programs
- Networks for Academic, Civic, Professional & Social Engagement
- Culturally Dynamic & Inclusive Environment
- Compelling Motivation to be on Campus

INSTITUTIONAL CULTURE

- Culture of Integrity
- Culture of Social Responsibility
- Culture of Mutual Respect
- Culture of Innovation

LEADERSHIP & GOVERNANCE

- Trusting & Informed Partnership between Leadership & Regents
- Dynamic, Diverse and Effective Leadership
- Highly Effective Distributed University System

FACULTY & STAFF

- Balanced Quality of Life for Faculty & Staff
- High Level of Staff & Faculty Cooperation
- Recognition & Compensation Programs Linked to Outcomes

TEACHING & LEARNING

- Competency-based Learning
- Committed to Lifelong Learning
- Balanced Scholarship
- Innovative & Diverse Pedagogies



HEALTH SCIENCES

- Integrated HSC Academic & Service Model
- National Model for Public Health & Care of Diverse Populations
- Premier Health Care Choice for NM
- Top 50 Academic Health Science Center in Total Research Funding

STRATEGIC PARTNERSHIPS

- Robust public/private Relationships for Economic Development
- Strong Relationships with Other Educational Institutions
- Multi-Disciplinary Partnerships Among Arts & Sciences

DISCOVERY & INNOVATION

- Leader in Interdisciplinary Teaching & Research
- Superb Research Infrastructure to Enable Discovery, Innovation & Technology Transfer
- Double Grants and Contracts as Compared to 2012

MARKET POSITION & BRAND

- Destination University Recognized & Sought out by Students & Faculty
- Effective/Programmatic Brand Management
- Globally Relevant

INFRASTRUCTURE & FINANCIAL PERFORMANCE

- Aligned Resources & Values
- Stronger Endowments/Foundation
- Fiscal Transparency
- High Performance Infrastructure

Concurrent with drafting of the Goals, UNM began an interactive process of developing specific Objectives or targets over the next two academic years that if achieved, will produce accelerated and measured progress toward UNM 2020. Again, it must be understood that UNM 2020 is not a set of commitments or constraints but rather a beacon on the horizon. Progress is expressed through the Tactics – which are activities consistent with the Objectives. Measuring progress through target dates, specific percentage changes and other elements serve as guideposts along the way to achieving the Objectives. Each Objective will, over time, change to reflect the work accomplished and the work yet to be completed. As such, UNM 2020 will be a living process that should incorporate all of the strategic activities in the UNM community.

UNM 2020 Strategic Plan: <http://unm2020.unm.edu/index.html>

INNOVATE ABQ

Economic Development

Innovate ABQ is a UNM economic revitalization/jobs creation initiative located in Downtown Albuquerque. Launched in 2013, it is supported by local businesses and governmental entities including the City of Albuquerque, Bernalillo County, the State of New Mexico and the New Mexico Educators Federal Credit Union. UNM has purchased a seven-acre site at the corner of Central and Broadway to house Innovate ABQ. Described as an example of the 'live, learn, work, play' concept, this approach to urban planning supports mixed-used real estate projects and districts that can help revitalize communities by:

- Leveraging the research power of the University of New Mexico and the workforce development engine of the Central New Mexico Community College;
- Engaging the City of Albuquerque, the County of Bernalillo, and the State of New Mexico;
- Connecting with Albuquerque's entrepreneurial and established business community to create new companies, grow existing ones and attract more out-of-state business and individuals.

The vision of the initiative is to create an integrated community that is multi-dimensional. Research and commercial labs, science and technology companies, educational programs, business services, support services, and commercial and retail businesses share space and a business incubator in a way that allows people to work together as they wish and be an essential part of the community that is connected to UNM. The idea is to create a one-stop-shop approach for companies, entrepreneurs and investors seeking to evaluate new technology business opportunities. The integrated community would also include residential living space and amenities for the workers who benefit from the new jobs created by this synergy.

The mission of the initiative is to strengthen the economic base in the mid Rio Grande region and throughout the state of New Mexico by creating more knowledge-worker jobs for graduates from our educational institutions and experienced workers in our communities. The mission is achieved by commercializing new technologies developed at our research universities, by public/private partnering with our national labs, business organizations, civic leaders, non-profit sector, national and global corporations, and public schools, and by providing entrepreneurial education and support.

In July 2016, Innovate ABQ partners kicked off construction of the Lobo Rainforest Building. The nearly 160,000-square-foot, six-story facility will be the Phase I Building at the seven-acre core site of Innovate ABQ at Broadway Boulevard and Central Avenue in downtown Albuquerque.

UNM SCHOOL OF ENGINEERING PROFILE

The University of New Mexico School of Engineering was founded in 1906. It has an annual academic budget of approximately \$17 million and includes six departments: Chemical and Biological Engineering; Civil Engineering; Computer Science; Electrical and Computer Engineering; Mechanical Engineering; and Nuclear Engineering. The School also oversees six research centers: the Center for Biomedical Engineering; the Center for Emerging Energy Technologies; COSMIAC; Manufacturing Training and Technology Center, the Institute for Space and Nuclear Power Studies; and the Center for Water and the Environment. In addition, the school also collaborates with three UNM centers: the Center for High Technology Materials, the Center for Microengineered Materials, and the Center for Advanced Research Computing.

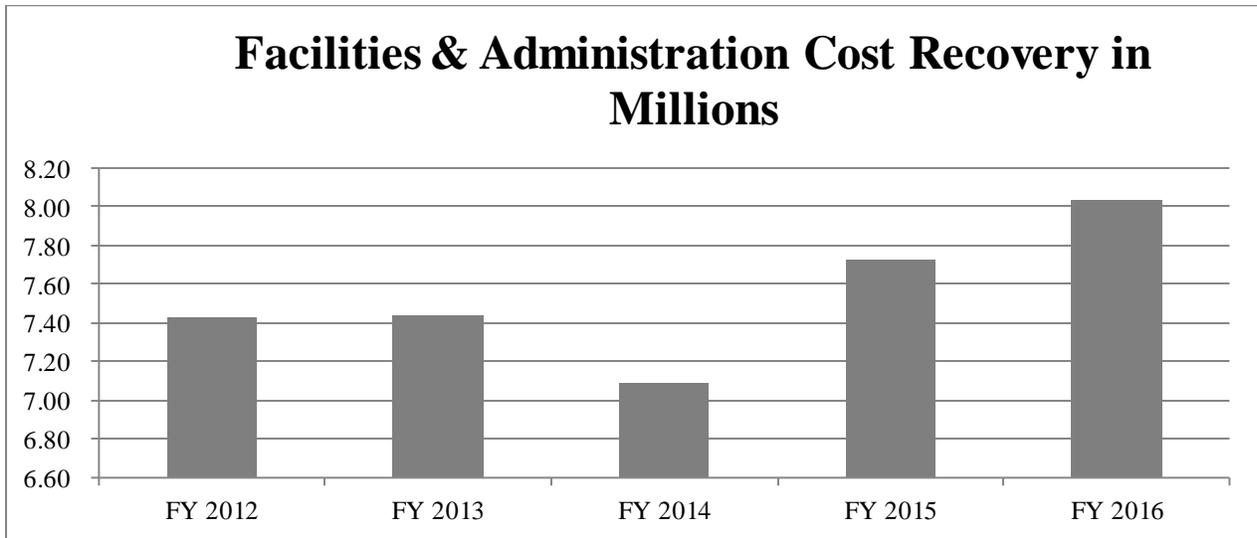
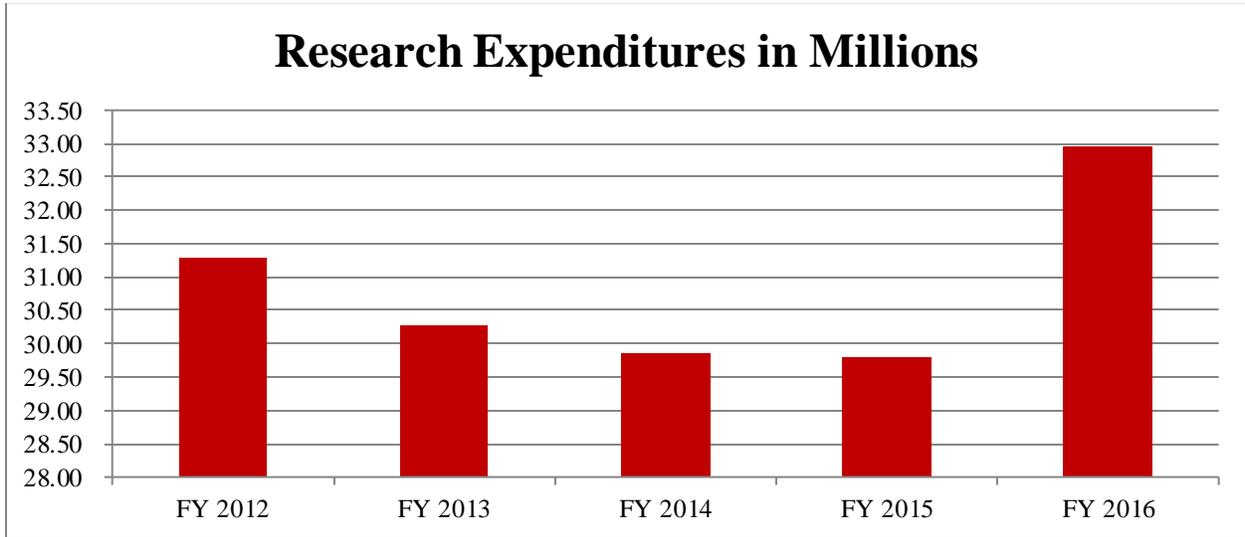
In addition to departments and research centers, the School also features three interdisciplinary graduate programs: Optical Science and Engineering; Nanoscience and Microsystems; and Biomedical Engineering.

In fiscal year 2016, the School had \$32.9 million in total annual research expenditures. As of Fall 2015, there more than 3,100 undergraduate and graduate students enrolled in the School.

The School of Engineering has extensive collaborations with the three federal laboratories in New Mexico: Sandia National Laboratories, Los Alamos National Laboratory, and the Air Force Research Laboratory. Several researchers at the three laboratories hold joint faculty appointments in the School, including two senior Sandia employees who are tenured members of the School's faculty. Faculty and students in the School have also been actively involved in generating intellectual property in the Through STC.UNM, the university's technology-transfer office, issuing 220 patents and creating 44 startups just in the last decade.

In March 2016, the School of Engineering became the first school at UNM to have an endowed deanship — the Jim and Ellen King Dean of Engineering and Computing.

SCHOOL OF ENGINEERING RESEARCH EXPENDITURES



RESEARCH PROFILE

The School of Engineering's research and contract expenditures for fiscal year 2016 were \$32.9 million. The School has extensive collaborations with the three federal laboratories in New Mexico: Sandia National Laboratories, Los Alamos National Laboratory, and the Air Force Research Laboratory, and several researchers at the three laboratories hold joint faculty appointments in the School. Through STC.UNM, the university's technology-transfer office, faculty and students in the School have been actively involved in generating intellectual property, issuing 220 patents and creating 44 startups just in the last decade.

Recent major research projects in the School include:

- [A \\$2 million grant](#) in 2016 from the National Science Foundation that has the potential to revolutionize the way engineering is taught to undergraduate students. This project seeks to address the urgent need to produce more engineers who are ready to solve societal problems that include clean water, a clean environment, diverse and sustainable energy sources, and improved health care.
- [A \\$5 million grant](#) in 2014 from the National Science Foundation that is funding the Center for Water and the Environment UNM. The Centers of Research Excellence in Science and Technology (CREST) award from NSF provides support to enhance the research capabilities of minority-serving institutions through the establishment of centers that effectively integrate education and research. The award promotes the development of new knowledge, enhancements of the research productivity of individual faculty, and an expanded presence of students historically underrepresented in STEM disciplines.
- [A \\$7.5 million grant](#) in 2012 from the Multiuniversity Research Initiative from the Department of Defense. The goal of the project is to study the interaction of electrons with novel dispersive structures made from meta-materials in order to develop novel sources of coherent electromagnetic radiation.

The School of Engineering has six centers of research that serve as catalysts for collaboration with partners in the public and private sectors in meeting the challenges of tomorrow:

Center for Biomedical Engineering

Dr. Andrew Shreve, Director

Web address: <http://cbme.unm.edu>

Established in 2005, the UNM Center for Biomedical Engineering administers and coordinates the specialized research of senior engineers, scientists and clinicians, plus the work of dozens of researchers-in-training. The center serves as a portal for biotech interactions between UNM and national laboratories, industry partnerships, and other educational institutions within New Mexico and elsewhere. The center has a focus on improving the health of all citizens and stimulating the economy of the state. This is accomplished by conducting biomedical research on a variety of topics, from low-cost medical diagnostics for the Third World to state-of-the-art flow cytometry. To spark the imagination of younger scientists with the idea of growing up to become

scientists and engineers, center staff is regularly engaged in outreach activities in local schools. The center has been the driving force behind a successful multi-year effort to establish biomedical engineering as a degree program at UNM.

Center for Emerging Energy Technologies

Dr. Andrea Mammoli, Director

Web address: <http://ceet.unm.edu>

UNM's Center for Emerging Energy Technologies supports the rising generation of energy resources, such as harnessing energy from sunlight or wind, converting it to other forms, storing this energy, and distributing it to end users. The mission of CEET is to facilitate collaborative research that is interdisciplinary in nature. The center is a meeting place for faculty, students, and practitioners from the School of Engineering, UNM, and outside to work together to find the solutions to one of society's most pressing needs, that of sustainable energy. The role of CEET is to support faculty and researchers in all stages of the research enterprise — writing proposals, administering grants, providing facilities and instrumentation, and organizing workshops and conferences. In particular, CEET provides an environment to foster large-scale research efforts, involving universities, industry and the national labs. The goal of CEET is to assist the economic growth of New Mexico by developing competitive new technologies, and by training and preparing tomorrow's workforce through providing an environment of research excellence in which to pursue advanced degrees.

Center for Water and the Environment

Dr. Kerry Howe, Director

Web address: <http://cwe.unm.edu>

The mission of the Center for Water and the Environment is to conduct cutting-edge research into technological and engineering-based solutions to problems with water and the environment in a framework that considers the social, economic, policy, regulatory, and legal implications. Practical solutions to problems related to water availability in arid environments and in times of drought, and problems associated with energy generation and consumption, are particularly relevant to the center's mission in light of the criticality of these issues to the state of New Mexico, the southwestern United States, and their global importance. The center also strives to increase the participation of underrepresented populations in science, technology, engineering, and math professions. A major source of support for the Center for Water and the Environment has been provided by the Centers for Research Excellence in Science and Technology program at the National Science Foundation.



COSMIAC (Configurable Space Microsystems Innovations and Applications Center)

Dr. Edl Schamiloglu, Director

Web address: <http://cosmiac.org>

COSMIAC was established in 2008 by the Air Force Research Laboratory, the University of New Mexico, Sandia National Laboratories, Los Alamos National Laboratory, and the Xilinx Corporation. The center was initially created as the charter program of the Phillips Technology Institute of the Air Force Research Laboratory's Space Vehicles Directorate at Kirtland Air Force Base. COSMIAC's role is to promote aerospace innovation through the reliable and responsible use of configurable technology in military and aerospace systems by serving the interests of industry, government and academia. The center's three primary focuses are research and development, workforce development, and outreach.

Institute for Space and Nuclear Power Studies

Dr. Mohamad El-Genk, Director

Web address: <http://isnps.unm.edu>

The Institute for Space and Nuclear Power Studies was founded at UNM in 1984 as a research and development organization within UNM's School of Engineering with a focus on space power and propulsion technologies and related fields. The institute offers educational and professional training and conducts research in many fields of space nuclear power and space systems technology in cooperation with UNM's departments of Chemical and Biological Engineering and Nuclear Engineering.

Manufacturing Training and Technology Center

Dr. John Wood, Director

Web address: <http://www.mfg.unm.edu>

The 57,000-square-foot Manufacturing Training and Technology Center at UNM supports teaching and training, research and development, start-up companies and manufacturing prototyping, and extension service activities. MTTC houses offices, labs, classrooms, prototyping bays, CAD rooms, an auditorium, and a 6,200-square-foot cleanroom. The center features robot hardware and control software, CAD/CAM packages, factory simulators, dynamic systems modeling software, and extensive semiconductor processing equipment.



The School of Engineering also collaborates closely with three other UNM centers:

Center for Advanced Research Computing (CARC)

Dr. Susan Atlas, Director

Web address: <http://www.carc.unm.edu>

CARC was established at UNM in 1994 as a sister center to the Maui High Performance Computing Center. In its short history, the Center has enjoyed a number of significant firsts, including the first distributed-memory parallel Linux cluster available through NSF allocation, Los Lobos (at the time the largest open Linux cluster in the world), and the first use of Access Grid

collaborative technology. The Center's mission is to enable excellence in research at UNM in science, engineering, biomedicine, humanities, and the arts through support for parallel supercomputing, large-scale informatics, and advanced visualization. It aims to do this by providing leadership to enhance interdisciplinary research and education at the University. Computation is rapidly becoming a critical tool for conducting research, scholarship and creative activity in all academic disciplines. The center's goal is to provide the capabilities needed to continue the growth of advanced computing-based research at UNM, including support for traditional supercomputing, parallel cluster-based computing, large-scale research databases, and novel architectures. The Center is dedicated to fostering new, interdisciplinary collaborations based on computation and encouraging novel applications of computation in research, while continuing to grow traditional applications of computing in the science and engineering disciplines.

Center for High Technology Materials (CHTM)

Dr. Arash Mafi, Interim Director

Web address: <http://www.chtm.unm.edu/>

CHTM is a nationally recognized center for photonics and microelectronics.

This strong funding record has allowed CHTM to furnish its facilities with modern equipment and to maintain a focus on leading-edge research topics that are relevant to government and industry. CHTM offers high quality and advanced research capabilities, where, for example, a novel semiconductor device can be designed, fabricated and evaluated completely in-house. This fertile research environment provides a superb educational opportunity for graduate students, allowing them to gain an



in-depth experience of their research topic. In addition they have the opportunity to interact with peer groups and to establish a professional network through conference and meeting presentations. This experience gives graduating students a competitive "edge" as they enter the job market. CHTM's active research and education role also promotes economic development in New Mexico. There are now several spin-off businesses that have grown from research projects at CHTM and the "hi-tech" environment that CHTM.

Center for Micro-Engineered Materials (CMEM)

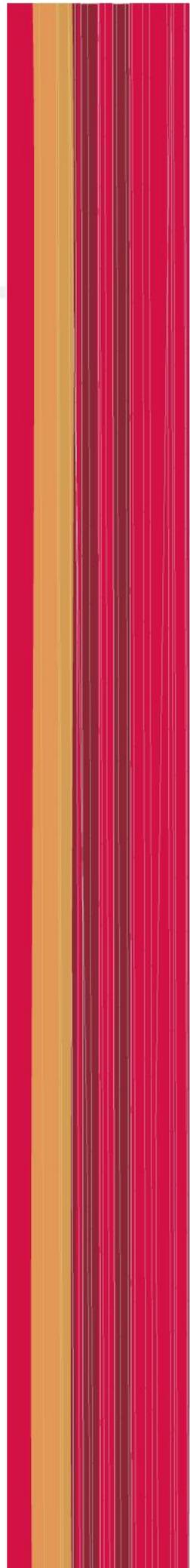
Dr. Plamen Atanassov, Director

Web address: <http://cmem.unm.edu/index.html>

The UNM Center for Micro-Engineered Materials (CMEM), formerly a Center in the National Science Foundation (NSF), Industry/University Cooperative Research Center (IUCRC) program serves as a focal point for materials science research and education at UNM. The research performed by the CMEM faculty is highly leveraged because of close collaboration with research scientists from Sandia National Laboratories (SNL) and Los Alamos National Laboratory (LANL) and the Sandia Center for Integrated Nanotechnology (CINT). The Center owns, or has access to, state-of-the-art facilities to synthesize and characterize a broad range of materials including a one-of-a-kind Small-Angle X-ray Scattering Center. The CMEM has close ties

to the UNM/Rutgers Ceramic and Composite Materials Center (CCMC), an NSF I/UCRC. It also provides leadership for the State of New Mexico NSF EPSCoR initiative in nanotechnology and the development of a Ph.D. degree granting Nanomaterials and Microsystems graduate program. The Center for Micro-Engineered Materials has been a site for the NSF Research Experience for Undergraduates Program from 1994-2003. Since 2003, we are a part of the DOD ASSURE program (Awards To Stimulate and Support Undergraduate Research Experiences).

UNM



UNM

OFFICE of THE PROVOST & EXECUTIVE VICE PRESIDENT
for ACADEMIC AFFAIRS