School of Engineering - Vision

As founding Dean of the School of Engineering at UC Merced, my primary goal has been to build an engineering program that is worthy of being part of the University of California, standing tall with the (eight) other extraordinary Engineering programs within the system.

We strive to recruit top quality faculty that would establish an engineering school characterized by world-class research and education. These scholars have worked tirelessly to develop their own research programs and groups; to establish a strong foundational curriculum, course offerings, and framework for student success; and to create from scratch the physical and administrative academic infrastructure necessary upon which to build the 10th UC campus.

We have also assembled a very talented and equally committed staff that provide outstanding support necessary for the administration of the School and the success of our academic mission. In addition to, and clearly supportive of, this overarching goal of developing a strong research framework, my vision for the program has included five additional specific goals:

1. Establish a strong and sustainable foundation for student recruitment, retention, and success that will contribute substantially to the nation's dwindling technical workforce, and nourish future engineering research and development.
2. Build an engineering program that will serve as a model for diversity, representation, and inclusiveness within which our students, our faculty, and our staff can reach their highest potential.
3. Fulfill our commitment to the University of California in creating a framework for shared faculty governance based on administrative openness and collective decision making.
4. Fulfill our commitment to the region and the State in helping to bring improved economic development and educational opportunity to the California Central Valley.
5. Leverage fully the innovation of modern information technology to empower significantly the personal and professional productivity of our academic community.

Jeff R. Wright

Founding Dean of Engineering

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About the School of Natural Sciences

VISION AND MISSION

The University of California has a tripartite mission of research, teaching and public service. Research excellence forms the foundation upon which academic programs flourish in all of the campuses of the University of California system. Research excellence translates to excellence in graduate education and undergraduate experiences. The School of Natural Sciences is developing stellar academic programs for discoveries and applications in science and technology and for graduate and under-graduate education. The research and teaching programs will serve as an economic engine for the region and the state of California and contribute to development of a college-going culture in the San Joaquin Valley.

The vision of the School of Natural Sciences is to develop multidisciplinary and inter-disciplinary research programs and innovative undergraduate and graduate curricula, to distinguish itself among established science programs, to provide the best possible preparation for its students as they address the many scientific challenges of the 21st century, and to address the needs of its stakeholders in the region and the state of California.

- ***Multidisciplinary and inter-disciplinary research programs***

The programs in the School of Natural Sciences are thematically categorized into Applied Mathematical Sciences, Environmental and Evolutionary Sciences, Health and the Environment, Biomedical Sciences, Biological Chemistry and Physics, Atomic, Molecular and Optical Physics and Condensed Matter Physics and Chemistry. Thematic groupings emphasize the commitment of the faculty and School administration to research programs that encourage cooperation and collaboration across disciplines. Thematic groupings acknowledge that finding solutions to complex problems often requires multi-disciplinary expertise and the growth of research programs should not be hampered by disciplinary boundaries.

- ***Innovative undergraduate and graduate curricula***

Curricular innovations in degree programs and foundational courses for science and engineering students are highly valued by the School. The faculty and school administration are committed to innovative pedagogies that increase the recruitment and retention of students in mathematics, the sciences and engineering. The faculty of the School of Natural Sciences has the wonderful opportunity to create and shape curricular programs and offerings to provide both the scientific breadth and the depth required for graduates in the 21rst century.

- ***Provide the best possible preparation for its students as they address the many scientific challenges of the 21st century***

UC Merced has the most ethnically and culturally diverse student body amongst the UC campuses. In AY 2006-2008, more than 40% of the students on campus declared majors in the School of Natural Sciences, providing enormous opportunities to develop a diverse workforce with a strong science and mathematics preparation. An appreciation and commitment to diversity at all levels (students, staff and faculty) in the School and across multiple activities are essential for success of our students, the School of Natural Sciences and UC Merced.

- ***Contribute to addressing the needs of stakeholders and constituents in the San Joaquin Valley and the state of California***

The School of Natural Sciences recognizes its responsibility and value to the public and is committed to addressing the needs of its stakeholders in the State and in the San Joaquin Valley region. The San Joaquin Valley has been underserved in access to higher education and in reaping the economic and intellectual benefits of a research university. Graduates of degree programs in mathematics and sciences will be well-prepared to contribute to solving complex problems that face our region, state, nation and the world. Access is the key to personal success in modern society and an important goal is opening doors to higher education to groups that have not traditionally had opportunities in higher education. The research programs of faculty in the School of Natural Sciences have far reaching implications to advance the health and well-being of humans and the environment, while making fundamental discoveries about the world in which we all live.

VALUES

Excellence in Scholarship
A top priority of the School of Natural Sciences is scientific excellence. Programs of scientific excellence form the foundation for continued success in recruiting the best faculty, encouraging students, and providing multiple pathways to improve higher education and economic opportunities. The School recognizes the value of disciplinary depth, as well as interdisciplinary and multidisciplinary academics and research.

Academic excellence in training scientists and citizens
The School of Natural Sciences places a high priority on increasing the scientific literacy of all students and increasing the pool of students in UC Merced's academic programs in math, science and engineering. There is an increasing need for well-trained scientists, for scientifically trained decision makers and for a scientifically literate public to meet the global and technological challenges of the 21st century. Academic programs that encourage recruitment and retention of students into math and sciences, while maintaining the highest academic standards are a high priority. Innovative curricula and commitment to teaching excellence in Natural Science courses are essential for student success.

Recognition of the special responsibilities incumbent on a new school of sciences
The School of Natural Sciences recognizes that as the first new school of sciences in the 21st century it has a special responsibility to be innovative in its research, teaching and relationships with its partners and communities. The School is committed to developing unique multi- and inter-disciplinary research and academic programs and recognizes that partnerships with higher educational institutions and communities leverage resources across the region, state and nation, enabling new synergies and promoting progress.

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Educational Philosophy

The educational mission of our school is to create a rich learning environment by looking at people and society from a variety of disciplinary perspectives. As a student at the first research university of the 21st century, you will be exposed to a unique learning environment with relatively small classrooms and a highly interdisciplinary atmosphere. Our new university provides the opportunity for direct interaction with SSHA faculty, an experience typically found only in private colleges, at a public school price.

At UC Merced, you will be able to:

- Study diverse realities and complex social issues
- Research social institutions and cultural systems and the impact they have on societies
- Understand the world by examining its past and exploring its future
- Use the latest technology to investigate human thought, behavior, and interactions
- Appreciate diverse cultures by learning about and taking part in their creative expressions

You will also develop highly transferable skills:

- Decision-making: Through an understanding of history, politics, economics, and society learn to make sound, informed decisions.
- Communication: Learn to communicate ideas effectively in oral and written form.
- Self and society: Examine the world's cultures through study of its languages, experiences and expressions.
- Scientific literacy: Apply the technology and quantitative tools utilized in the world's leading industries and learn how to communicate scientific knowledge to a broad audience.
- Leadership and teamwork: Through involvement with individuals across disciplines, learn the skills necessary to function as part of a team and work cooperatively with a wide variety of people.

There are also numerous opportunities for undergraduate research experience with faculty who are studying topics at the cutting edge of their fields.