

UNIVERSITY OF DAYTON School of Engineering

Mission,
Vision,
Beliefs and
Goals

2008

Mission

The Mission of the School of Engineering is to educate complete professionals who have an integrated knowledge of the theory and practice of engineering together with an equally strong understanding of the arts and sciences that will prepare them for fulfilling careers of leadership, service, and life-long learning for the good of society.

Vision

This Vision of the School of Engineering is to become a preeminent engineering school providing transformational learning experiences that prepare engineering students for leadership, service, and success in life, profession, and society. It is our goal to be recognized for outstanding engineering research that positively advances the human condition, addresses critical needs of the world, and provides economic growth to our region, our nation, and our world. Finally, we are committed to being a nurturing, inclusive environment that promotes the development of all members of the School of Engineering family to their full potential while supporting and advancing the Catholic and Marianist mission of the University of Dayton.

Beliefs and Convictions Integral to our Mission

We educate students toward a profound knowledge that engineering is more than just a problem-solving discipline.

While our curriculum and our research do not directly address issues of faith, we nonetheless affect in many ways the character and sensibilities of our students, not just as problems solvers but as individuals who respect the world that they shape for the good of others. Accordingly, our students receive an education that is rigorously directed toward advanced knowledge in engineering, while demonstrating at every turn the important relationships and interdependencies that exist between engineering and the rest of the disciplines across the full spectrum of human knowledge. We therefore educate students to be both intellectually astute and discerning in all their work and morally responsible in the face of the demands and rewards of our ever-changing world.

We constantly affirm that the education of the complete professional is best accomplished in the family spirit in which



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love, understanding, and support are equally matched by expectation, challenge, and accountability. This means that we champion the philosophy that engineering is an integrated profession and that engineers work best in society in collaboration with others toward the betterment of our world through an ethic of service to humanity, an insistence upon justice for all, and an expectation of peace.

In conclusion, our mission as a School of Engineering within a comprehensive, Catholic, and Marianist university is given meaning and coherence through our beliefs and convictions. While we welcome people of all faiths and those of no faith to our engineering school, we do so as part of a community with many shared values regarding our educational mission.

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Goals

Educate for transformation and prepare a new generation of servant leaders. ◀

We will provide distinctive undergraduate engineering education that cultivates a new generation of servant leaders. Excellence in undergraduate education has been a hallmark of the School of Engineering and continues as our central focus. Our students will learn best and achieve their full potential when the engineering vocation is understood in the context of a changing world. Our students become “distinctive graduates, ready for life and work” when, as a talented and diverse community of learners, they integrate their learning among disciplines and understand that their journey of lifelong learning is just beginning. Our students begin to discern the true end and real business of living when, through experiential learning and service, they see their place in a larger community beyond campus. The power of our graduates to work for good is amplified and extended in scope as they develop inclinations and abilities for full engagement in an increasingly integrated world. We will continue our work toward advancing academic excellence and integrated learning in community through emphasis in five areas.

We will provide exemplary graduate programs in strategic cross-disciplinary areas. Steadily, over the past 30 years,



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our School of Engineering has built graduate programs of increasing stature and productivity with the result that we have placed our graduates into leadership positions in industry, academia, and government while advancing the frontiers of knowledge. Our challenge now is to build on that strong foundation, to propel selected graduate programs into the highest level of excellence nationally, and to strengthen selected graduate programs through strategic thrusts in new areas of research. At the same time, we must provide our graduate students with improved opportunities to embrace and exemplify the central tenets of our Catholic, Marianist identity and mission. The following are five benchmarks by which we can measure our progress toward these goals:

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Cultivate outstanding scholarship and research. ◀

We will attract, develop, and retain a distinguished faculty and staff – respected in their professions and renowned for their active support of our Vision, Mission, and shared values. At the heart of our School of Engineering must be a faculty renowned for its daily living of Marianist values; respected for scholarly contributions at the frontiers of knowledge; and known nationally and internationally for excellence in teaching, research, and service. While we do not seek to compete in absolute size with the engineering schools of major public universities, it is within our reach – and it is our commitment – to excel in all that we do as our actions are guided by our Catholic and Marianist values. It is essential that we develop new funds to support faculty pay at competitive levels; to compete successfully for the best of faculty from underrepresented groups; and to create new endowed chairs, not only for research, but also for world-class teaching. We must develop improved models for collaboration and integration with the University of Dayton Research Institute (UDRI) and with respected technology centers of our region to add depth and breadth to our faculty. By seeking out, hiring, and developing faculty better than ourselves, we can stimulate continued improvement and legitimate pride in our research; our teaching; and our service to the local, regional, national, and world communities.

We will achieve national distinction in research and scholarship by addressing critical needs of society. Our continuing work to advance the frontiers of knowledge and to share that learning with others is a key source of inspiration, stimulation, and personal satisfaction for our





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faculty, staff, and students. Advances made by our research teams provide rich and varied employment opportunities for our graduate students and many undergraduate students. Our faculty members' research successes create an exciting environment of discovery that energizes our community, informs our teaching at all levels, and strengthens our reputation. Since the problems of the world do not recognize boundaries, we can best advance through focused initiatives that encourage collaboration across disciplines. This will require innovative teaming relationships with valued partners on campus and beyond and will also require some difficult choices within resource constraints. We will attract stronger students, more distinguished faculty, and even better strategic partners as we improve our ability to compete for, and win, outside support for our programs. Our reputation will deservedly be enhanced by a steady increase in the visibility of our contributions through refereed professional publications, active participation in respected conferences, and service on committees, panels, and working parties of national and international significance. Four initiatives will be our principal thrusts during the next five years:

Strengthen and promote the University's distinctive Catholic and Marianist identity. ◀

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We constantly affirm that the education of the complete professional is best accomplished in the family spirit in which love, understanding, and support are equally matched by expectation, challenge, and accountability. This means that we champion the philosophy that engineering is an

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Advance international and intercultural citizenship and engagement. ◀

Develop a welcoming and supportive environment on our campus and in all of our programs that realizes our goal of true diversity in community. Our students, faculty and staff understand and actively encourage respect for multiple heritages and perspectives as we strive to become a more multicultural and international university. Foster learning, research, and service programs that contribute to greater social justice and the common good. Do this in collaboration and partnership with others.

Practice responsible stewardship. ◀

We will design, build, and manage resources and facilities for efficient, effective support of faculty, staff, and students. Through excellent stewardship of our resources, we can build and sustain the strong combination of funding, physical plant, facilities, information, and people who enable our steady advance toward excellence in research, teaching, and service to our community. Our Marianist calling to educate in the family spirit suggests that how we care for our most precious assets – our own faculty, staff, and students – will determine whether we remain true to our Vision and Mission. Caring, sharing attitudes, through which we treat one another, not as individuals, but as persons, will help our School be a wonderful place to live and work. By developing a sense of community for all members of the extended School of Engineering family, including faculty, staff, students, parents, alumni, and friends and collaborators across the University and beyond, we will encourage a culture of philanthropy that can sustain and advance our important work. Through open processes that share information about our physical plant, equipment, and information systems, and by prioritizing our investments in harmony with this strategic plan and in response to our constantly changing environment, we can get the most out of what we have while planning always for our future.

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