

Strategic Plan

School of Forest Resources and Environmental Science

MichiganTech

6-15-07

(Text in Bold is from Michigan Tech's 2006 Strategic Plan)

The School of Forest Resources and Environmental Science was founded in 1936 with the mission to: a) provide the state of Michigan and our stakeholders with skilled foresters and wood scientists; and b) provide our stakeholders and the state of Michigan with research results to better inventory, maintain, and grow our State's forests. Since then, we have expanded our programs to not only include our past forestry program but also educational and research programs in applied ecology, wildlife ecology, genomics, and biotechnology. Our location, adjacent to Lake Superior and in one of the largest and finest expanses of northern hardwoods in the nation, provides students, faculty, staff, alumni, and friends with many opportunities for experiential learning and scholarly efforts. The U.J. Noblet building, with over 67,000 sq feet of classrooms, labs, and offices, contains state-of-the-art instructional and research equipment. Our 5,500 acre Ford Research Forest and Center allows us to provide students and faculty with living examples of conservation and management practices in hardwood, softwood, and wetland ecosystems and to extend our educational programs to many others. We pride ourselves on the quality of faculty and staff we employ, the students we educate, the scholarly questions we ask, and the respect we have for each other.

MISSION

Michigan Tech's mission is to prepare students to create the future.

The School's mission is to prepare students to sustainably manage our natural resources. We provide leadership in forestry and in natural resource science, management, and education.

VISION

Michigan Tech's vision is to grow to become a premier research university of international stature, delivering education, new knowledge, and innovation for the needs of our technological world.

The School's vision is to be a premier community of scholars who emphasize social-environmental interconnectedness, interdisciplinary education and research, and environmental responsibility. We will enhance our position as a world leader in the education of those who manage our natural resources and develop public policies, in order to sustain and restore ecosystems, across diverse landscapes, for a global society.

OUR FUTURE

The future of the University and the School will be driven by the quality of faculty, staff, and students we attract, the quality of the education we provide, the ability to place our graduates in the workforce, and the capacity to make significant contributions to scientific and professional communities, and our stakeholders. Significant financial impacts, such as reduced state funding and lack of additional endowments and gifts, will influence our capacity to control the above-mentioned drivers.

The School's education and research programs are directed at instruction and science as they relate to future natural resource management within the state, nation, and world. To strategically plan, the following "future" will drive the School's education and research efforts:

- Human demography and development will cause more environmental changes and influence our ability to sustainably manage natural landscapes.
- Global climate change and loss of biodiversity will impact ecosystem functions.
- Urban settings and large federal, state, corporate, and non-profit land holdings will increasingly be used for recreation and/or preservation.

- Increased utilization of real-time, computer based technologies such as GIS, GPS and remotely-sensed images will improve our knowledge of resource availability and use.
- Forests in the US and in other countries will be more intensely used
- Biotechnological and genomic advances will improve natural and plantation resource management and enhance the world's knowledge of key characteristics that control plant and animal functions.
- Invasive species will significantly alter natural and manmade landscapes.
- Globalization will influence the use of forests and change career opportunities for natural resource graduates.
- Environmental restoration in degraded areas will be ecologically and economically important
- Fragmentation and parcelization will drive public policy and how we manage our lands in the US and around the world
- Managing natural resources in urban areas will become increasingly important.

CORE AND ASPIRATIONAL VALUES

The principles that guide us and influence our decisions are based on the following core values:

- We serve Michigan's economic development through our quality forestry, ecology, quantitative, and biotechnology educational and research programs, with emphasis on sustainable land use decisions to maintain a quality of life.
- We strongly influence society now and into the future, through the principles students learn in our classes, the mentoring we provide, and the respect for others' ideas and cultures.
- We inspire thought by how we teach, and are committed to providing an exceptional educational experience at both the undergraduate and graduate levels.
- We have a passion for science, and scholarly efforts are viewed by all as a creative extension of continuous learning and are rooted in everything we do.

The values to which we aspire are:

- We strive to continuously be conscious of the global connectedness of our decisions.
- We recognize the importance of a diverse faculty, staff, and student community.
- We foster stronger leadership and communication among faculty, staff, and students.

GOALS

Michigan Tech's focus is improving lives and preserving our world through sound, innovative uses of science, engineering, and technology. Our society strives for economic prosperity, improved health, and responsible use of environmental resources. Moving forward, Michigan Tech will be a leader in responding to these needs and challenges in Michigan, the nation, and the world. We will attract exceptional faculty and students who will develop, understand, apply, manage and communicate science and technology – all with the goal of a prosperous, sustainable world. Progress toward these ambitious objectives will be measured by the national and international impact of our research and scholarly activities, and by the accomplishments and reputation of our faculty and graduates. Increasingly, Michigan Tech will be sought out and recognized for its ability to educate, to innovate, and foster economic growth.

The three main goals of the University's strategic plan are related to people (Goal 1), education (Goal 2), and research (Goal 3). To this end, the School's specific topic areas and goals are given below:

GOAL 1: Attract and support a world-class and diverse faculty, staff, and student population.

Student Quality

- *Attract and retain bright, motivated, and creative undergraduate and graduate students.*

Diversity

- *Educate and promote diversity and its importance to our faculty, staff, and students, providing a framework for successfully attracting and retaining a diverse faculty, staff, and student body.*

Ecologically Sustainable Buildings

- *Determine the feasibility of making the U.J. Noblet building ecologically sustainable.*
- *Expand our facilities to build on our strong ecology and genomics programs.*

GOAL 2: Deliver a distinctive and rigorous discovery-based learning experience grounded in science, engineering, technology, sustainability, and the business of innovation.

Incorporation of Sustainability in Educational Programs

- *Integrate the concept of sustainability into our educational programs.*

GOAL 3: Establish world-class research, scholarship and innovation in science, engineering, and technology that promotes sustainable economic development in Michigan and the nation.

Sustainable Economic Development

- *Develop a Michigan Conservation Corps program for at-risk youth, centered at the Ford Center, to weave an educational program with the development of a “first of its kind” self-sustaining community inspired by Henry Ford’s model sustainable community. This community will be rebuilt using instruction in new technologies for biofuels, alternative energies, and natural resource conservation and be directed at Michigan’s economic development programs.*

Global Partnerships

- *Develop specific partnerships for graduate student and faculty exchanges with universities and other agencies in Taiwan and China. Other potential partners may come from Switzerland, Norway, and New Zealand.*
- *Develop partnerships with other US universities and other agencies with a high proportion of minorities. One potential is with the University of Hawaii – Hilo.*
- *Develop international partnerships/exchanges with our faculty and faculty in other targeted countries.*

Research Trusts

The School’s research thrusts for the coming years will be concentrated in the following areas:

- *Genomics (Biomass utilization, Biotechnology, Ecological Genomics)*
 - *Global Climate Change*
 - *Sustainable Ecosystem Management (Wildlife Ecology, Bioenergy, Invasive Species, Social and Spatial Context)*
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