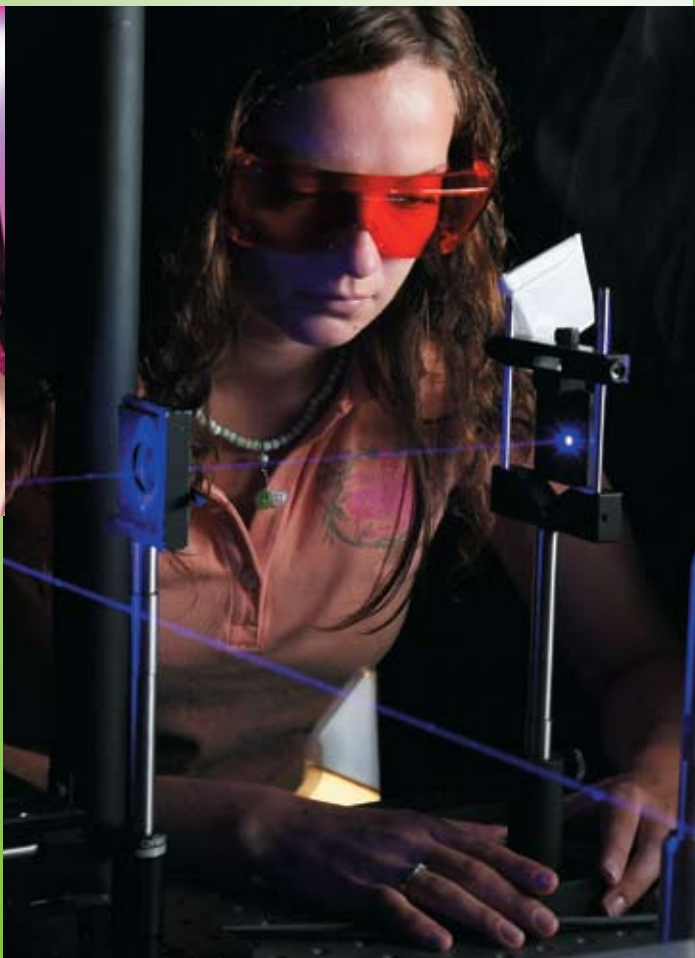


Fenn. Strategic Plan 2010-15

Fenn College of Engineering
»EST. 1923



Fenn College of Engineering

Today.

The following achievements that occurred during the past two years present a picture of Cleveland State University's Fenn College of Engineering as it currently stands: »new freshman enrollment up over the past two years by 75%, placing the College as one of the fastest growing programs in the nation »co-op programs significantly restructured and now being accredited by CAFCE »funded research activity up »more proposals submitted »more external funding won »prestigious recognitions achieved by faculty »internal & external reviews conducted »gifts to the college increased »endowments increased »physical facilities renovated »new partnerships with numerous Northeast Ohio high schools and corporations established »cost cutting measures implemented »revenue generation improved »fundraising improved »open communication increased »faculty productivity increased »faculty morale improved, as noted by our latest external review »and new programs are added, such as four 4+1 programs, a newly approved M.S. in Biomedical Engineering, a four-year Engineering Technology program, a Certificate in Biotechnology and a proposed reactivation of the Civil Engineering Technology program.



Executive Summary



Uniquely positioned, Fenn College of Engineering can maximize contributions to the University's desired signature themes – Health and

Sustainable Communities – through restructuring and refinement of current programming, research, and service. Simultaneously, the College can improve its own strong identity by better identifying core assets and building future plans upon these inherent strengths. The College can also encourage continued growth and diversity in pursuits of partnerships, research, and education by promoting a culture of active technical and pedagogical research and by moving to establish a more recognizable image in the region it serves.

Curricular rearrangements and enhancements can engage students and faculty in service learning practice as never before, while creating new industry relationships should position the college at the center of engineering research, development, and human capital within the region.

Raising funds through a formal capital fundraising and marketing campaign can provide the financial support for most of these ventures. The following plan will direct these efforts and allow the Fenn College of Engineering to grow in direct accordance with the missions of both Cleveland State University and the State of Ohio.

The following aspirations direct the College's movement towards regional and national recognition:

- » Welcoming, engaging, and developmentally rich place for students to learn
- » A commitment to diversity and equal opportunity for all students, faculty and staff
- » Research distinction producing active faculty involved in promising fields
- » Intellectual core built on key areas of focus, in line with university mission
- » Community presence demonstrated through visible service
- » Positive economic impact resulting in regional growth and employment

STRATEGY

Strategic measures for achieving the visions and aspirations of the Fenn

College of Engineering have been developed during the comprehensive strategic planning process. Listed below, these objectives – encompassing almost all components of the College's operations – provide thematic focus to the specific actions to be taken during the next five years.

OVERALL STRATEGY & OBJECTIVES

- » Enhancing Research Productivity and Identifying Research Focus Areas
- » Increasing Enrollment and Support for Students
- » Enhancing the Curriculum
- » Improving Marketing and Capital Fundraising
- » Extending the Existing Connections and Establishing New Relations with Industry

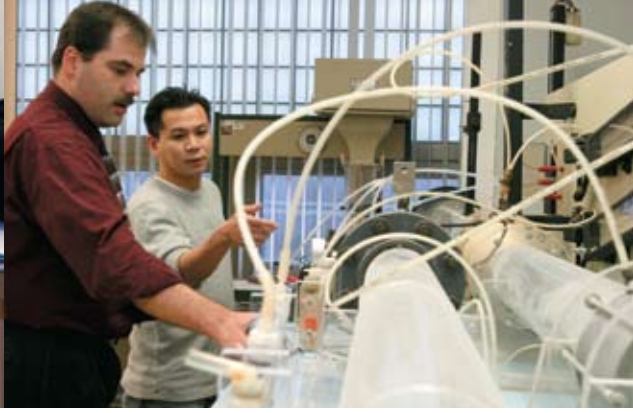
OUTCOMES

Following successful implementations of the strategic plan as contained within this document, 2015 will find the College operating at the center of engineering education and research in Northeast Ohio. From this position of regional influence, the College will likewise use its improved distinction, educational capacity, and newly developed resources to promote Cleveland State University's mission and Centers of Excellence on a national stage.

Bahman Ghorashi
Dean



Cleveland State University
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Enhancing the Curriculum

- » Implement an Engineering Service Project curriculum that links the regional community needs with the benefits of engineering service learning.
- » Enhance the effectiveness of the engineering curriculum in all departments, from freshman through senior years, with initiatives to better connect theory and practice.

Research Productivity

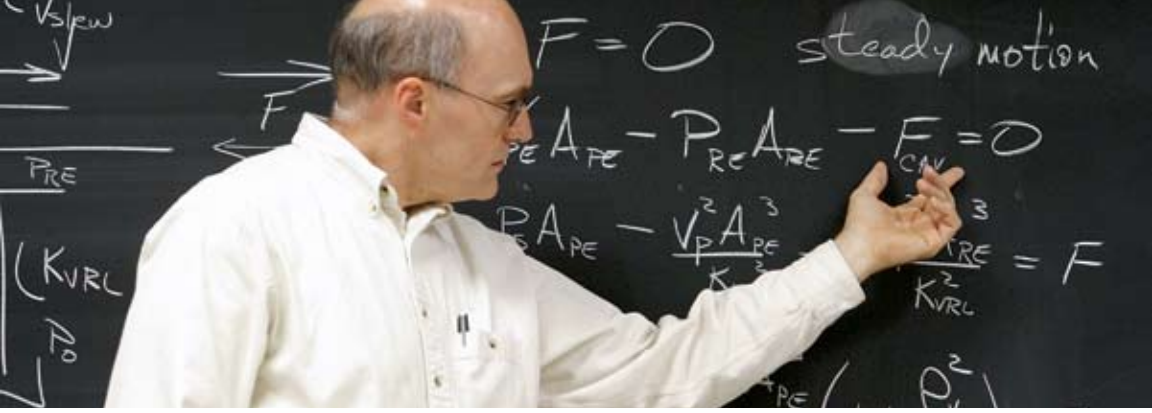
- » Increase research productivity and quality by improving the infrastructure and climate to facilitate research
- » Build on current research strengths in areas where there is a committed nucleus of active researchers with potential to impact the regional economy, particularly in areas where these intersect with the University areas of excellence in personal and community health and civic engagement
- » Increase graduate student enrollment and quality of graduate research training.
- » Engender collaborative research at the college and university levels, as well as with external partners in industry and other research institutions

POTENTIAL CORE RESEARCH AREAS THAT COULD BE DEMONSTRATED TO BE A CORE NUCLEUS FOR GROWTH:

1. Controls and Instrumentation: Researchers (including those with the Center for Advanced Control Technologies and the Center for Rotating Machinery Dynamics and Control) from ECE, MCE, and CHE have funding for research from industrial sponsors, NASA, and NSF.

2. Power engineering: This area includes power beaming, power storage, power conversion, electric machines and drives, and alternative energy sources (solar, wind, fuel cells, and nuclear). Researchers in these areas are from ECE, MCE, CHE, and IME, and have obtained funding from DARPA, the Air Force, the Department of Energy, NASA, the NSF, and industrial sponsors.

3. Transportation Safety: Researchers (including those involved in the Transportation Center) from CVE and ECE. Funding for these areas have come to several researchers from Department of Transportation, NSF, and industrial sponsors.



4. Surfaces, interfaces, and advanced materials:

This includes related areas encompassing research in biosensors, materials science, membranes, and separations. Researchers in these areas from CHE, ECE, and IME have obtained funding from NIH, DOE, NASA, Foundations, and industrial sponsors.

5. Sensors: Research in sensor design, software systems, and network protocols include researchers in ECE, MCE, and CVE and has been funded by NSF and industrial sponsors.

6. Engineering Education: Scholarly research in Engineering Education is a potential area for growth and collaboration with the College of Education and area High Schools. This may not be classified as traditional research, but is a form of fundable scholarship for the college. Faculty from all departments have been involved in this form of scholarship through Fenn Academy, the Design and Innovation Center (DICE), the Transportation Center, and Diabetes Initiative for Applied Biomedical Engineering Technologies (DIABET). Funding has come from NIH, DOT, NSF, and companies.

Relations with Industry

- » Establish a one-stop engineering R&D support center involving expert faculty, engaged students, dedicated staff and physical facilities at CSU and its affiliates
- » Revitalize and expand the Co-op program to provide professionally enriching experiences to our students while helping with their educational expenses and their future job prospects, as well as helping local industry to fulfill their need for highly qualified engineers
- » Develop partnerships to help industry in the Northeast Ohio region and beyond to acquire and maintain a competitive edge through the activities at the engineering center and the Co-op program





Marketing and Capital Fund Raising

- » Promote the aspirations and success stories of the College and increase
- » College's state and national visibility
- » Strengthen our relations with both internal and external constituencies such as industries, alumni, communities, CSU's administration and other colleges.
- » Raise capital funds

Enrollment and Student Support

- » Achieve an impressive reputation by increasing enrollment and student support
- » Review scholarship distribution process and expand available scholarships
- » Implement the updated Recruitment and Retention Plan
- » Support the newly formed 4+1 programs
- » Establish international partnerships





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Fenn College of Engineering

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