

NMSU has the Potential to be a High Profile University Through its Engineering College

The College of Engineering Vision Matches that of the NMSU Regents

- The NMSU COE is a leader in providing a K20 pipeline for NM
 - COE STEM outreach has impacted close to 1500 middle and high school students per year through NM BEST, NM PREP, NM VEX, PLTW, 4-H robotics workshops, and other summer camps.
 - NMSU COE has increased undergraduate enrollment ~18% over the past five years (2009-13)
 - NMSU COE has developed a pipeline of students through the NM Community College system
- The NMSU COE produces students with high employability that are in high demand from industry

The NMSU COE is succeeding in identified areas for performance-based funding

The College of Engineering Vision Matches that of the NMSU President and Provost

- NMSU COE is a recognized leader in technologies to improve the management and use of land and water -- areas of focus for a Land Grant College
- NMSU COE is also a leader in energy research and communications/optics, which are also state priorities
- NMSU COE is increasing the number of graduate students
 - Increased from 417 to 445 over last five years (6.7%)
- NMSU COE has good potential for new revenue through its research funding (Research funding is averaging ~\$16M/yr)

What Industry likes about NMSU COE graduates

Technically sound engineers

- “NMSU COE graduates have a great fundamental education”
- “able to compete with the larger, more prestigious universities”
- “NMSU graduates perform well in our company compared to those from other universities across the country”

Strong diversity

- “We recruit at NMSU because we find talented, diverse students”
- “being ranked at the top for an HSI would place NMSU in an even stronger position”

How Could NMSU COE Improve Its Brand

| Recommended NMSU COE Focus Areas | | | | | | | |
|----------------------------------|------------------------------------|------------------------|------------------------------|-------------------|-------------------------|-------------------------|-----------------------|
| | Growing the college/more graduates | More graduate students | Improve COE national ranking | Increase Research | Recruiting new students | Retention of professors | Diversity of Students |
| Aerojet Rocketdyne | | | | | X | X | X |
| Boeing | | | X | X | | | |
| Exxon | | | X | | | | X |
| Exxon Fuels | X | X | | | | | |
| Halliburton | X | | X | X | | | |
| MIT/LL | | | X | X | | | |
| NASA | | | | X | | | |
| Raytheon | X | x | X | | | | |
| Sandia National Laboratories | | | X | X | | | |
| TEAM | | X | X | | | | |

Issues Identified by the COE Dean's Advisory Council

- New faculty slots and improved labs are needed to maintain the quality of education expected by students
 - COE has grown ~20% in the past five years and has not received a commensurate number of new faculty slots
 - Professors need free time to engage in more research (which would provide more revenue to NMSU and the COE)
 - More professors could also support more graduate students
- Facilities are old and in most cases lab equipment is antiquated
- Improving the COE national rankings was identified as the most promising area for improvement
 - Could PSL/NMSU relationship be changed so that its revenue could be credited to NMSU?
 - Could more focus from the President's office be applied to the US News and World Report annual ratings process?

Issues Identified by the COE Dean's Advisory Council (cont)

- Classrooms need to be equipped with active learning furniture and equipment if faculty are to incorporate new teaching methods (movable tables/chairs, white boards, interactive TV and projectors)



Summary

With the proper focus, emphasis and support, NMSU COE has the potential to become a nationally-recognized institution that could provide prestige, revenue, and economic development to the University and to the State of New Mexico