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**COLLEGE of ENGINEERING and APPLIED SCIENCE**

**SUMMARY of COLLEGE PLAN – 2009-2014**

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**MISSION**

The University of Wyoming's College of Engineering and Applied Science will provide excellent education, research, and service in chosen fields of engineering and applied science. The College emphasizes connectivity with society, life-long learning, and the essential problem-solving and collaborative skills needed to address the frontier challenges facing Wyoming, the nation and the world.

**VISION**

The College will be recognized nationally and internationally for the excellence of its education and research programs, and for its central role in the economic development of Wyoming and the surrounding region. Wyoming and the College will thrive when they partner together to address –

- The frontier challenges facing Wyoming over the next 20 years
- The roles of technology in addressing these challenges
- Collaboration with Wyoming's constituencies to pursue these roles

The frontier challenges extend beyond Wyoming, and arise from pressing concerns regarding *regional and national economies, energy, infrastructure, health, climate change processes, poverty and security, and sustainability of natural and built environments.*<sup>1</sup>

Viewed collectively, the challenges imply substantial needs for more technology educated people, technology innovation, and a "systems" approach. The challenges also imply that technology education and innovation fuse with developments in other expertise areas (e.g., business, health, agriculture, education) to resolve the complex issues the challenges entail.

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<sup>1</sup> The challenges can be articulated in several ways; e.g., the National Academy of Engineers' [Grand Challenges for Engineering](#) (published in 2008) delineates 14 specific challenges encompassed by the concerns cited here.

**DEVELOPMENT**

To realize its Mission and Vision, the College will pursue the following development actions:

1. Deliver accredited contemporary programs of education that equip its students to lead projects integrating expertise from multiple disciplines and backgrounds;
2. Extend visible, synergistic partnerships with other University of Wyoming units, as well as with key state and national agencies and laboratories, industries, and other universities;
3. Increase undergraduate student numbers and diversity during the next five years;
4. Grow, in both size and quality, programs of research and graduate study;
5. Broaden and increase funding sources to provide the College greater fiscal capacity;
6. Configure and foster the College’s faculty and staff resources to facilitate growth in student numbers and expanded research and programs of graduate study; and,
7. Build up the College’s physical functionality and professional ambience to facilitate research and education addressing the frontier challenges.

**METRICS**

The table of metrics below provides a brief profile of the College five years ago, now, and as targeted five years out for Engineering (ENG), Computer Science (CS), and Atmospheric Science (AS) or Earth Systems Science (ESS) students.

<b>Metric</b>	<b>AY2004-05</b>	<b>AY2008-09</b>	<b>College Target (AY2014-15)</b>
BS enrollment (ENG/CS/ESS)	1,148 1,000 <sup>2</sup> /148/0	1,260 1,135/118/7	1,550 1,350/150/50
MS enrollment (ENG/CS/AS)	91 62/15/14	104 82/12/10	160 120/20/20
PhD enrollment (ENG/CS/AS)	73 55/13/5	91 66/16/9	120 96/12/12
Total faculty head count (tenure-track/ac. professional)	79/12	81/14	95/15
# of BS degrees (ENG/CS/ESS-AS)	195 AY05 164 <sup>3</sup> /31/0	186 AY08 164/22/0	250 AY15 205/35/12
# of MS degrees (ENG/CS/AS)	42 36/2/4	32 AY08 28/3/1	55 40/6/7
# of PhD degrees (ENG/CS/AS)	9 AY05 7/1/1	17 AY08 14/3/0	30 20/5/3
Research grants, contracts	\$8.8M	\$11.3M (FY08)	\$15M per year
Gifts, Donations	\$2M (FY04)	\$4.6M (FY08)	\$4M per year

[Note: Wyoming budget allocation for the College in FY09 is \$10.2M]

<sup>2</sup> In 1962, BS enrolment was 1,009

<sup>3</sup> In 1962, CEAS graduated 161 BS engineers.