

January 9, 2008

To: Gerald E. Lang, Provost  
Larry Hornak, Co-chair, WVU 2010 Plan

Fr: Eugene V. Cilento  
Glen H. Hiner Dean

Re: **WVU 2010 Strategic Plan: CEMR Standardized Annual Report**

### **Summary**

This 2006-07 annual report summarizes the ongoing CEMR strategic planning and alignment with the WVU 2010 Strategic Plan. The College has continued to be successful in its strategic business organization plan, guiding principles for operations, facilities plan, recruitment and retention strategies, corporate relations strategy, and a development plan for private fundraising.

The College strategic business plan involves using best practices, innovation, and all available assets to build and provide students, faculty, and staff an exciting learning environment. It also is the basis for investment in research and academic programs. The guiding principles provide three basic tenets for investment in programs: (1) quality of the program, (2) ability to be self-sufficient, and (3) ability to support economic development in West Virginia.

The CEMR facilities plan has helped the College successfully revitalize lab and classroom space. The College has used the student facility fee, university support, private funds and other fees to invest over \$27 million in facility improvements. This total includes the new four story addition now under construction (opens in July 2008) that includes a \$6.5 million commitment from the College toward a total cost of \$12 million. The facilities plan includes preliminary planning for a new multi-story research building in 2012.

We continue to do well in undergraduate enrollment. We will maintain this important focus but it is clear more needs to be done to prepare entering students for the rigors of the degrees offered in this College. While we have improved first year to sophomore retention, it is not clear we have done sufficiently well to retain students beyond the sophomore year. We are studying this situation more closely. However, the College also is focusing on graduate education because it is critical to the growth and support of the WVU research enterprise. The College implemented a stipend policy in 2006-07 and has encouraged each department to go beyond meeting the minimum College stipends. We must achieve more competitive stipends. Associate Dean Myers is leading the effort to improve all aspects of graduate education, from recruitment to placement.

The corporate partnership plan is successfully promoting industry relations and involvement in the College, and is assisting with placement of undergraduate and graduate students in internships, coop and permanent positions. This plan is now evolving to the University level.

The CEMR strategic development plan has driven private fund raising this decade to support our activities. In 2006-07 the mini development plan the College implemented is now evolving into the strategy for the College in the next WVU campaign. The potential exists for continuing major alumni and corporate matching support for our initiatives and is the key focus for the College development plan in the next WVU campaign.

Our continued success in implementing and aligning College plans with the WVU 2010 plan includes strategies to attract and retain the next generation of bright and energetic faculty to the College. We have made considerable progress but still experience difficulty in recruitment of a diverse work force. We continue to have a focus on inter- and multi-disciplinary research and educational programs, and this is an important aspect of our recruitment plans. It is important that we do so to increase the recognition and profile of the College and University nationally.

Overall, the College has done well and is gaining momentum in its academic programs, research and outreach this decade. Our goal to build and maintain an exciting learning environment is making good progress and we are on track. While we face challenges to keep this momentum building, and limited resources to grow more quickly, we continued to be successful in meeting the CEMR overall goals of the WVU 2010 plan in 2006-07.

This Report contains three sections: (1) a summary of the specific objectives for 2006-07, (2) an Appendix containing a brief discussion of the Key Indicators with Benchmarks data provided by the Provost office as well as additional data provided by the College, and (3) Attachment I that describes the overall CEMR goals for the WVU 2010 Strategic Plan.

Please let me know if this Report meets your needs, or if you need additional data. I look forward to the feedback and discussion with you and the Provost on the CEMR Annual Report.

EVC/evc

cc: Associate Deans Warren Myers and Royce Watts  
CEMR Executive Committee members

## Summary of Specific Objectives for 2006-07

- **Goal 1.**
  - offered more competitive scholarships for recruiting undergraduate students
  - increasing the admission criteria for HS students (for entering class of 2008-09)
  - implemented a College stipend policy to increase and make stipends more competitive
  - continue to grow the enrollment in the PhD program
  - begin to focus on all aspects of the graduate program, from recruitment to placement
  - updated guidelines for MS and PhD study, examine opportunities for off campus programs
  
- **Goal 2.**
  - continue to improve research and teaching facilities to help attract and retain faculty
  - develop a plan to bring the College to about 130 faculty positions over the next 3-5 years, including that needed to replace faculty leaving for various reasons
  - continue to support competitive faculty startup packages and salaries
  - invest in new interdisciplinary programs that will ensure sustained growth of undergraduate and graduate programs and lead to new external funding
  - develop a focus in energy (6 positions), biomedical and materials engineering (5 positions), environment (3 positions), and Mining Extension and Outreach (2 positions)
  - invest in CEMR energy programs because WVU has excellent opportunities to be a world class leader in fossil energy research and education due
  - continue to support research programs that continue to be successful in securing external research funding and attracting quality students
  - add new state supported staff positions to support faculty activities
  
- **Goal 3.**
  - continue investment in facilities
  - continue renovations but at a slower pace because we have borrowed significant funds to construct the new ESB addition
  - raise matching funds for a multi-story specialty research building in 2012
  - provide an exciting learning environment for technology education
  - provide the learning environment needed to support education and research programs
  - provide more opportunities to promote and involve undergraduate students in research
  - infrastructure requires investment in human resources, finances and facilities
  
- **Goals 4 and 5.**
  - support economic development vital to expanding the WV economy
  - support new businesses and industries coming to WV
  - invest in CEMR faculty and targeted research areas that provide such opportunities
  - support technology transfer
  - support Mining and Manufacturing Extension and Outreach activities
  - collaborate in interdisciplinary areas across campus as well as with key federal agencies and national labs located within driving distance (NASA, FBI, NIOSH, NETL)

## Appendix

### Key indicators with Benchmarks

(data provided by Provost and supplemented with College data for annual reports)

**1a. Fall Headcount Enrollment.** CEMR enrollment continued to increase in 2006-07, and the College is on target with its stated overall enrollment goals. However, we are doing better in recruitment at the undergraduate level than the graduate level. Graduate recruitment partly reflects a strong job market for BS engineers and partly changing department policies for recruitment and administration of graduate students. It should be noted that in 2008-09 we have increased the HS admission requirements and so we expect some decrease (5-7%) in first time enrollment in the College. As a result there will be a small decrease in College enrollment. The CEMR admission criteria plan has been approved by the university and is consistent with the goal to increase the overall quality of the entering class. Please note that the data slightly underestimate the College enrollment because it does not include the ECAS pre-computer science and computer science students in our college. CEMR probably will continue to be about 10% of the overall university enrollment unless there is significant increase in STEM disciplines. Nationally this remains a little unclear although CEMR is typically within the top 60 engineering colleges in undergraduate enrollment (about 350 engineering institutions).

|                  |                            | <b>College/School</b> | <b>WVU Main</b> |
|------------------|----------------------------|-----------------------|-----------------|
| <b>Fall 2007</b> | Undergrad                  | 2,174                 | 21,145          |
|                  | Graduate                   | 689                   | 5,595           |
|                  | Professional               | n/a                   | 1,373           |
|                  | <b>Total</b>               | <b>2,863</b>          | <b>28,113</b>   |
|                  | Total including pre-majors | n/a                   | n/a             |
| <b>Fall 2006</b> | Undergrad                  | 2,092                 | 20,590          |
|                  | Graduate                   | 683                   | 5,105           |
|                  | Professional               | n/a                   | 1,420           |
|                  | <b>Total</b>               | <b>2,775</b>          | <b>27,115</b>   |
|                  | Total including pre-majors | n/a                   | n/a             |
| <b>Fall 2005</b> | Undergrad                  | 2,012                 | 19,510          |
|                  | Graduate                   | 737                   | 5,151           |
|                  | Professional               | n/a                   | 1,390           |
|                  | <b>Total</b>               | <b>2,749</b>          | <b>26,051</b>   |
|                  | Total including pre-majors | n/a                   | n/a             |

**1b. FTE Enrollment.** CEMR FTE enrollment fluctuates slightly from year to year due mostly to graduate student enrollment. Graduate enrollment in CEMR is heavily driven by research and not course credits.

|                  | College/School | WVU Main |
|------------------|----------------|----------|
| <b>Fall 2007</b> | 1,864          | 26,287   |
| <b>Fall 2006</b> | 1,908          | 25,678   |
| <b>Fall 2005</b> | 1,859          | 24,601   |

**2. First-year retention rate for first-time, full-time freshmen.** CEMR student enrollment is a work in progress. We have invested heavily in recruitment strategies that have worked well. We have focused recently on strategies to improve retention from the first to second year with some success. However, we now have concerns that these students may not survive into the third year in their major. The continuing reason for first-year student problems in engineering is primarily due to their lack of preparation in HS. Freshmen lack good study skills, time management skills, and have poor math preparation. Even students who come in with significant AP credit struggle. The rigors of college level math, chemistry and physics take their toll on the success and survival of the first year class. Some poor teaching in these first year basic sciences courses also contributes to the inability of freshmen to be successful in first year courses. This leads to reduced morale and confidence that they can complete an engineering degree, resulting in transfer out of the College.

|                                       | Students from CEMR retained in CEMR | Students from CEMR retained at WVU | WVU Retention |
|---------------------------------------|-------------------------------------|------------------------------------|---------------|
| <b>2006 Cohort (returned Fall 07)</b> | 70.7%                               | <b>81.7%</b>                       | 79.4%         |
| <b>2005 Cohort (returned Fall 06)</b> | 67.0%                               | <b>82.6%</b>                       | 80.5%         |

*Data Notes.* Only students who enroll in the college/school upon entering as first-time, full-time freshmen are included in the cohort used to calculate retention. Pre-majors not included in standard college/school enrollment, such as those advised by the Undergraduate Academic Services Center, are not included. Students retained by the university include students who have changed to majors to a different college/school but return to WVU for the fall semester of their second-year. Students retained by the college/school include students who return to the same college/school for the fall semester of their second year. These students may have changed majors, but they have not changed colleges/schools. Our data differ slightly from the % in the table.

**3. Six-year graduation rate for first-time, full-time freshmen.** Not available in a meaningful way and need not be included. Possible ways to demonstrate student persistence and completion include progression rates, % of senior headcount to % of undergraduate degrees awarded, or graduation rates for junior cohorts. Alternatively, graduate student statistics could be used since they are less likely to change majors. This metric is in need of further discussion and definition.

Warren Myers has collected the data shown in the table below. While the trend appears to be positive the data are incomplete and students need to be tracked better. The more recent cohort

data will provide more accurate and meaningful data. We believe that as the quality of the incoming freshmen class continues to improve that we also will have a six-year degree completion rate that improves.

**Years to a WVU Baccalaureate Degree for Students Entering the College of Engineering and Mineral Resources as a First-time Full-time Freshman Cohort.**

| Yrs-to- | 2000 Cohort |       | 2001 Cohort |       | 2002 Cohort |       | 2003 Cohort |       |
|---------|-------------|-------|-------------|-------|-------------|-------|-------------|-------|
|         | Annual%     | Cum%  | Annual%     | Cum%  | Annual%     | Cum%  | Annual%     | Cum%  |
| Gd      |             |       |             |       |             |       |             |       |
| <=4     | 19.5%       | 19.5% | 20.2%       | 20.2% | 21.9%       | 21.9% | 22.0%       | 22.0% |
| 5       | 26.8%       | 46.4% | 36.0%       | 56.2% | 31.1%       | 52.9% |             |       |
| 6       | 10.0%       | 56.4% | 6.8%        | 63.0% |             |       |             |       |
| >=6     | 2.5%        | 58.9% |             |       |             |       |             |       |

**4. Degree production for bachelor, masters, professional, doctoral, and total:** CEMR has continued to increase numbers of graduates in recent years and is ranked among the top sixty among engineering institutions for undergraduate degrees. The College goal to double PhD enrollment over the last several years has been successful. In the last two years we have graduated record numbers of PhD students. PhD graduates will fluctuate annually due to the time and external funding needed to support PhD students to degree completion. We hope to continue to increase the total graduate enrollment to about 1,000 over the next several years as well.

The reported data do not include ECAS CS graduation data and should because these students are taught in CEMR. Thus, in 2006-07, the total BS degrees are slightly under-reported and should be 386 and the total number of graduates should be 627. Slight differences in 2005-06 are also noted in the table below.

|                |              | CEMR              | WVU          |
|----------------|--------------|-------------------|--------------|
| <b>2006-07</b> | Bachelor     | 369 <b>(386)</b>  | 3,620        |
|                | Masters      | 213               | 1,459        |
|                | Professional | n/a               | 148          |
|                | Doctoral     | 28                | 396          |
|                | <b>Total</b> | <b>610 (627)</b>  | <b>5,623</b> |
| <b>2005-06</b> | Bachelor     | 351 <b>(356)</b>  | 3,372        |
|                | Masters      | 219               | 1,619        |
|                | Professional | n/a               | 168          |
|                | Doctoral     | 33                | 351          |
|                | <b>Total</b> | <b>603* (608)</b> | <b>5,510</b> |

\* This total differs by one from the Excel sheet sent previously because there was a discrepancy between the Measures of Success totals and the degrees by majors spreadsheet in IDEAS. Roberta Dean and Warren Myers think the discrepancy may have been a student with a double major in Eberly and CEMR, and that the degrees by majors sheet from the IDEAS Dashboard Indicators should be used. She is also checking to see why the Measures of Success has a different number.

**5. Degree production in STEM and health fields by specific degree program.** N/A. All degrees in CEMR at all levels are in the STEM disciplines. CEMR enrollment of under-represented minorities and women is lower than desired. We have been actively engaged in many efforts to reach out statewide to HS teachers and students. And, we are in the third year of a NSF grant. Engineers of Tomorrow, to increase recruitment to STEM disciplines, with a specific focus on recruitment of Appalachian women..

**6. Licensure pass rates.** Licensure is not a requirement for engineering degree programs. Students elect to take the Fundamentals of Engineering (FE) Exam, typically in their senior year. This is the first step to achieving licensure, which requires candidates who have passed the FE Exam while in college to take the Professional Licensure (PE) Exam after five years of experience. FE Exam pass rates have fallen in recent years for a variety of reasons. More CEMR students are taking the exam because they can do so for free (WV Board has provided this incentive) but they do so with out much preparation and often lack the interest to even take the exam. Currently, the FE exam results do not accurately reflect the ability of CEMR students taking the exam. We are working on ways to get students to understand the significance of what they are doing and to further improve what the College does to help them prepare for the exam. Little data are available for the PE exam.

These percent pass rates have been submitted by your college/school to Division of Planning, Institutional Research, and forwarded to HEPC. The pass rates are reported for the July 1st through June 30th. The rates have been included here to facilitate the progress reports on the college/school strategic plan.

| Level | Area | 2006-07 | 2005-06 |
|-------|------|---------|---------|
| N/A   |      |         |         |

**7. Sponsored program funding.** CEMR new research awards fluctuate significantly on a fiscal year basis due to faculty success in proposals submitted year round for new funding. It should be noted that the FY06 data represented a historic high water mark for the College and was partly a result of delayed Department of Transportation funding from the prior fiscal year (FY05). The consistent level of new proposal activity in CEMR this decade has been about \$20-25 million, and is primarily in research. It is expected that this will grow as recently hired faculty (about 15-20) become independently funded in their research programs. The more accurate assessment of faculty research activity has been research expenditures. In CEMR the growth over the last decade has been about 6% per annum, although we experienced the same flat response as the institution over the last three years. This was partly due to the lower productivity of newly hired faculty but also the significantly more competitive national grant situation. CEMR typically ranks among the top 5-6 of our defined group of 11 peers in research expenditures per faculty member.

|             |              | <b>CEMR</b>         | <b>WVU</b>           |
|-------------|--------------|---------------------|----------------------|
| <b>FY07</b> | Research     | \$20,381,161        | \$87,397,028         |
|             | Instruction  | \$869,757           | \$11,972,281         |
|             | Service      | \$95,615            | \$21,477,407         |
|             | Other        | \$339,962           | \$17,737,446         |
|             | <b>Total</b> | <b>\$21,686,495</b> | <b>\$138,584,161</b> |
| <b>FY06</b> | Research     | \$24,824,740        | \$88,323,826         |
|             | Instruction  | \$4,746,512         | \$12,857,671         |
|             | Service      | \$                  | \$22,351,083         |
|             | Other        | \$515,484           | \$19,337,113         |
|             | <b>Total</b> | <b>\$30,086,736</b> | <b>\$142,869,693</b> |

*Data provided by the Office of Sponsored Programs. The funding is the actual amount received by the college/school during the fiscal year. Funding for collaborative programs is split to reflect actual funding received by each college/school.*

**8a. Placement and employment rates for undergraduate students.** CEMR has conducted graduating student surveys for a number of years but data are usually spotty and incomplete. I think our overall placement is better than shown by the data but much depends on getting students to respond and to do so accurately. Warren Myers conducted a more complete survey this year and the data are summarized below. Our results are difficult to compare directly to the university data. Our student data suggested that of those who have decided, about 13% were accepted into graduate school and 52% had been at least offered a job. The 33% who were still deciding is large and I believe represents two phenomena: a great job market providing graduates more selectivity and a more recent trend among students to not rush into the job market.

In past years, from departmental data we typically appeared to have had about 75 - 80% of our students employed or going to graduate school by the time the survey was done in mid-spring semester. The lower trends seen in the last few years is not unexpected however, since many CEMR graduates today opt to take time off before they pursue their careers. It is an interesting and changing trend in students today, but still somewhat surprising given the very strong job market for graduates. The College will continue to improve career services for our students because we should be approaching 90% of our students employed or planning to enroll in graduate school by year end.

1. We had 218 responses from 280 potential<sup>1</sup> Spring 2007 graduating seniors.
  - 21 (9.6%) did a Co-op,
  - 115 (52.8%) did an Internship,
  - 8 (3.7%) did Study abroad;
  - 4 (1.8%) did Service Learning
3. When asked about their immediate employment/education status following graduation
  - 2% indicated they did not plan to work in the engineering profession or continue their education.

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<sup>1</sup> Surveys are given to seniors in one of their senior classes before final grades have been reported so some students reporting survey results may be graduating in August or later.

- 33% indicated they were still interviewing/searching for a job or graduate school.
  - 11% indicated they had a job offer(s) but have not yet accepted.
  - 13% indicated they had been accepted into graduate school.
  - 41% indicated they had accepted a job position in the engineering profession.
4. For those going to graduate school the Universities selected and the percentage going to each were as follows:
- Carnegie Mellon – 4.7%
  - Georgia Tech - 2.3%
  - Univ. of Colorado – 2.3%
  - Univ. of Florida – 2.3%
  - Univ. of Maryland – 2.3%
  - Univ. of Michigan – 2.3%
  - Virginia Tech – 2.3%
  - West Virginia Univ. – 76.7%
  - West Virginia Univ. School of Medicine – 2.3%
  - Xavier University – 2.3%

The graduate program selections were: 81% - MS; 9.3% Ph.D.; 7% MBA; and 2.3% Other. Fifty-eight and one-half percent indicated they were offered an assistantship/fellowship/etc: 3% received < \$1,000; 59.3% received \$1,000-1,500; 14.8% received \$1,500-2,000; 7.4% received \$2,000-2,500; and 7.4% received \$2,500+.

5. For seniors indicating they had accepted a job the states with the highest placements were West Virginia 25.8%, Pennsylvania 16.9%; Maryland 12.4%, and Virginia 11.2%.

The types of businesses in which the December 2006 and May 2007 seniors were employed are summarized in the following table.

| <b>Employer Business Area</b> | <b>Total</b> |
|-------------------------------|--------------|
| Academia                      | 1.1%         |
| Construction                  | 20.2%        |
| Consulting                    | 15.7%        |
| Financial                     | 1.1%         |
| Government/Military           | 14.6%        |
| Manufacturing                 | 23.6%        |
| Other                         | 12.4%        |
| Service                       | 11.2%        |
|                               | 100.0%       |

The annual starting salary reported for our December 2006 and May 2007 graduates is given in the following table (in units rounded to the nearest \$1000). Approximately 77% of the reported starting salary ranges were above \$50,000.

| <b>Annual Salary</b> | <b>Percent</b> | <b>No.</b> |
|----------------------|----------------|------------|
| 30,000-34,000        | 2.2%           | 2          |
| 35,000-39,000        | 4.5%           | 4          |
| 40,000-44,000        | 1.1%           | 1          |
| 45,000-49,000        | 14.6%          | 13         |
| 50,000-54,000        | 25.8%          | 23         |
| 55,000-59,000        | 20.2%          | 18         |
| 60,000-64,000        | 12.4%          | 11         |
| 65,000-69,000        | 1.1%           | 1          |
| 70,000+              | 16.9%          | 15         |
| (blank)              | 1.1%           | 1          |
| <b>Grand Total</b>   | <b>100.0%</b>  | <b>89</b>  |

The data included by the Provost is from the pilot Survey of Graduating Seniors, which was administered to May 2007 graduates. No other years are available at this time. Your college/school may have more comprehensive data that has been collected for accreditation or other purposes. Please feel free to use other sources for undergraduate placement and employment.

| <b>% of Respondents<br/>Prior to Graduation</b> | <b>CEMR<br/>(% responses)</b> | <b>WVU<br/>(% responses)</b> | <b>WVU<br/>(% viable surveys)<br/>(no response included as negative)</b> |
|---|-------------------------------|------------------------------|--|
| with post-graduation<br>employment              | 59.1%                         | 29.8%                        | 28.2%  |
| accepted into grad or<br>professional school    | 30.4%                         | 46.7%                        | 27.8%  |

The following data is not available from any central sources but should be included in the annual progress reports on the college/school strategic plan when available.

### **8b. Placement and employment rates for graduate students.**

In the 2006/07 graduation year (August & December 2006 and May 2007) we had 213 MS graduates and 28 PhD graduates. Of the 213 MS graduates and 28 PhD graduates we have survey results on 182 of the MS students and 25 of the PhD students respectively.

About 38% of those graduates not continuing to pursue graduate education reported salary data. Over all MS salaries ranged from \$32,000 to \$120,000 and PhD salaries from \$36,000 to \$90,000. On average PhD salaries were 2.3% higher than MS salaries.

| <b>Degree</b> | <b># Graduated</b> | <b># Reporting</b> | <b>Min Salary</b> | <b>Average Salary</b> | <b>Max Salary</b> |
|---------------|--------------------|--------------------|-------------------|-----------------------|-------------------|
| M.S.          | 213                | 77                 | \$32,000          | \$58,351              | \$120,000         |
| Ph.D.         | 28                 | 9                  | \$36,000          | \$59,667              | \$90,000          |
| Total         | 241                | 86                 | \$32,000          | \$58,488              | \$120,000         |

**9. Faculty awards**, in a chart or spreadsheet cross-listing teaching, research, and service categories with High-Recognition National Awards (see attachment), Discipline Specific Awards, and 2006-07 College/School or University Awards.

CEMR has not successfully or sufficiently promoted its faculty for major national awards. In 2006-07, the College was successful in getting its first faculty member inducted into the National Academy of Engineering (NAE). This is a very significant achievement and is based on career contributions to the engineering profession. Hopefully, this will help us promote other faculty for NAE election in the next five years. A goal is to have 1-2 more eligible for election by 2012. We also have been competitive in having new faculty receive prestigious NSF CAREER research awards over the last few years, and with several newer faculty developing significant educational and research programs we hope to have several more receive CAREER awards in the coming years. One CEMR faculty member was asked to give a prestigious invited talk at the 2007 annual NAE frontiers in science meeting. Several faculty members are significantly involved in their national professional organizations at officer levels. CEMR needs to focus more aggressively on nominations of faculty for national research, teaching and service awards.

**10. List of programs with national recognition** and evidence of recognition (e.g. ranking by *U.S. News* or accrediting agency). The MAE Department has been nationally ranked among peer MAE departments in enrollment and research funding. The College has been ranked among the top 60 peer engineering institutions in undergraduate enrollment and degrees in recent years, and is close to moving into rankings for numbers of PhD students graduated. We need to do more to promote our departments and programs for national recognition. We enjoy full accreditation for all our College programs. We will continue to accumulate data and provide an addendum to this item.

## **Attachment I**

### **Summary of CEMR Strategies to Support Each Broad Goal**

- **Goal 1: Attract and graduate high quality students.** CEMR does well in undergraduate recruitment and has strategies to improve first year retention in recent years. We refocused CEMR scholarships, and partnered with the university, to recruit top HS students by offering four year scholarships that build on WVU scholarships. We have exceeded our recruiting plan to reach and maintain a class of 600 – 650 first-time students. In 2007-08 CEMR enrolled 697 freshmen. We have increased admission standards for 2008-09 that may actually decrease first time enrollment but is consistent with our goal to improve the overall quality of the incoming class. We continue to make changes to improve the freshmen year experience and to better prepare students for majors. While retention has improved from about 62% to 72% in recent years, we are now focusing retention efforts on students once they get into their majors because the early data suggest we may be experiencing a decline in students moving from the sophomore to junior years.
- **Goal 2: Recruit and retain high-quality faculty committed to the land-grant mission.** We have hired more than 15 faculty in focused research areas that support the university research mission, including six new positions provided by the Provost in 2005-07. We have competitive starting salaries and better startup packages, with increased expectations on new faculty to secure external research funding. The annual evaluation process to provide more mentorship to new tenure track faculty is working. A few faculty members have left WVU before their critical year. We are trying to provide faculty better quality lab space for their research and graduate students, and the new building addition will alleviate some but not resolve our research space problems. We were successful in nominating faculty for national awards, including NSF CAREER Awards, and were honored to have one faculty member inducted into the NAE in fall 2007. Our goal is to have several more faculty members considered for NAE status or similar national awards over the next five years.
- **Goal 3: Enhance the educational environment for student learning.** We continue to make significant improvements in classrooms and teaching labs. We are increasing awareness among students for early career and professional development, and this year the annual career fair was a huge success, with more companies attending than we could accommodate in an expanded two-day format. The new addition will provide a learning center and large classroom but will not resolve our many space issues, and space needs for new programs and research.
- **Goal 4: Promote discovery and exchange of knowledge and ideas.** The College has invested in new interdisciplinary programs, while continuing to support strong disciplinary research areas important to the overall WVU research enterprise. Major new programs under development include new programs in biomedical engineering, energy, and materials engineering. The College focused open faculty positions to support the
- WV Nano initiative and to begin to build critical mass in these other areas. Much more investment is needed for the College to be successful. The new ESB addition will provide some much needed space to permit realignment of labs and to support shared facilities.
- **Goal 5: Improve West Virginia's health, economy and quality of life.** CEMR faculty remains heavily involved in activities to promote the development, licensing and transfer of new technology, and have accounted for a significant portion of WVU technology transfer activities this decade. Economic development is a significant factor in CEMR decision-making principles for investment in existing and new programs. The goal is to support existing WV businesses and to help new industries coming to the State. Quality of life issues as related to economic development and good jobs for West Virginians are an important part of the College mission. CEMR continues to be a good corporate partner for any industry interested in operations in this state and in the last year we have been involved in discussions with numerous industries and agencies (e.g., FBI, Northrup Gruman, Lockheed Martin).