

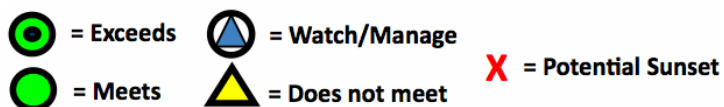
**Department of Civil and Environmental Engineering and Geodetic Science  
Performance Plan FY09 – Accomplishments – FY10 Goals**

**Mission for CEEGS**

The Department of Civil and Environmental Engineering and Geodetic Science (CEEGS) provides accredited undergraduate programs in civil engineering and environmental engineering that prepare graduates for outstanding practice in their profession. Graduate research and teaching will advance the state-of-the-art in civil, environmental, and geodetic engineering.






The mission for CEEGS is:

- To increase the impacts on the profession by producing successful, influential graduates; improving the practice – near and long term – of civil, environmental and geodetic engineering
- To create a department culture that fosters collaboration and interdisciplinary research by creating mechanisms to reward synergies among groups, develop opportunities, and promote synergy
- To increase the output of high quality research that impacts the field, enhances the department’s reputation, and attracts students, faculty and funding





# Performance Goal 1: Improve the output of high-quality research

## Strategies and Action Items

Strategy 1 – Improve the quality and impact of the Department’s research program	
Action Item	Expectations
Focus new and replacement faculty and research-related investment along strategic and programmatic lines – <i>The department conducted a faculty search for a person in the area of energy, emphasizing the use of biotechnology and biomolecular engineering for the development and application of renewable and sustainable energy technologies. We had two strong female candidates, but were not able to complete a faculty hire.</i>	
Increase research expenditures by 10% – <i>Total research expenditures increased from \$3.2M (FY08) to \$4.4M (FY09) – an increase of 36%.</i>	
Increase research expenditures per faculty member by 10% – <i>Research expenditures per faculty member increased from \$147K (FY08) to \$200K (FY09) per faculty member, an increase of 36%.</i>	
Increase the number of proposals submitted by 10% – <i>The total number of proposals submitted increased from 47(FY08) to 73 (FY09) proposals – an increase of 55%. However, the % of proposals awarded decreased from 40% in 2008 to 19% in 2009.</i>	
Increase the number of professional society awards to faculty by 10% – <i>In FY08, there were 2 awards to our faculty. In FY09, there were 7 professional society awards presented to our faculty: Patrick Fox for the 2008 International Geosynthetics Society Award, 2009 Thomas A. Middlebrooks Award, 2008 International Journal of Geomechanics Best Paper Award, and 2008 Chandra S. Desai Excellent Contributions Medal; Frank Croft for the 2009 Orthogonal Medal for Distinguished Service in Graphic Science; Bill Wolfe and Tarunjit Butalia for USEPA Coal Combustion Products Partnership (C2P2) National Research Award; and Hojjat Adeli was named an AAAS Fellow.</i>	

### FY10 Planned Activities for Goal #1:






- Increase the Department support (cost-share) by 10% for focused, collaborative research initiatives in key research areas – i.e., energy, sustainability & the environment, mobility and transportation, computation and information
- Complete hiring of biotechnology faculty member
- Increase the number of high-impact, high-visibility research program submissions by 10%






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- Increase the acceptance rate of research program awards by 10%
- Increase research expenditures by 10%
- Increase faculty member research expenditures by 10%

## Performance Goal 2: Provide accredited undergraduate programs in civil and environmental engineering that prepare graduates for outstanding practice of their profession

### Strategies and Action Items

Strategy 1 – Increase enrollment in undergraduate programs of civil engineering and environmental engineering	
Action Item	Expectations
Increase number of graduates in civil engineering by 10% – 70 students graduated with a BS in civil engineering in FY09 compared to 92 students the previous year – a decrease of 22 students (24% drop).	
Increase enrollment of undergraduates by 10% – In AU08, we had a total enrollment of 475 students (454 students in civil engineering, 3 students in environmental engineering, and 18 students in geomatics engineering). In AU09, we had a total enrollment of 562 students (546 students in civil engineering, 9 students in environmental engineering and 17 students in geomatics – an increase of 20% in civil, a 3X increase for environmental, and a 0% increase in geomatics). Overall, this was an increase of 18%.	
Increase the number of high-ability high school students that accept the department freshmen scholarship – In FY08, 11 scholarships were offered and 8 accepted – a 73% acceptance rate. In FY09, 8 scholarships were offered and 6 accepted – a 75% acceptance rate. Developed and printed marketing piece for undergraduate program.	
Strategy 2 – Improve the undergraduate experience	
Action Item	Expectations
Improve and provide support for teaching laboratories – Plumbing and faucets for HI050 were repaired for AU09 classes. Laboratories need improvement, as recommended by the Academic Review Team.	
Increase number of teaching awards by 10% – In FY08, there was one teaching award at the COE level for our faculty – Hal Walker for the Boyer Award for Excellence in Teaching Innovation. In FY09, there were 3 faculty recognized for teaching excellence at the COE	

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level: Halil Sezen for McCarthy Engineering Teaching Award, Frank Croft for MacQuigg Award, and Dorota Brzezinska for Harrison Faculty Award for Excellence in Engineering Education.	
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**FY10 Planned Activities for Goal #2:**




- Define quarter-to-semester undergraduate program
- Develop recruiting program for environmental engineering program
- De-activate the geomatics engineering program
- Develop plan to improve undergraduate teaching laboratories

**Performance Goal 3:  
Enhance and mentor the graduate student educational experience**

**Strategies and Action Items**

<b>Strategy 1 – Increase enrollments in the graduate programs</b>	
<b>Action Item</b>	<b>Expectations</b>
Increase graduate student enrollment in civil engineering by 10% – <i>In FY08, we had 91 graduate students (64 CE, 27 GS). In FY09, we had 105 graduate students (73 CE, 32 GS) – an increase of 10%.</i>	
Increase enrollment of new graduate students by 10% – <i>In FY08, we had 28 new graduate students enroll in the graduate program. In FY09, we had 24 new graduate students – a decrease of 17%.</i>	
Increase the number of MS graduates in civil engineering and geodetic science by 10% – <i>In FY08, we had 10 MS graduates and in FY09 we had 24 MS graduates in civil engineering – an increase of 140%. In FY08, we had 10 MS graduates and in FY09 we had 5 MS graduates in geodetic science – a decrease of 50%.</i>	
Increase the number of PhD graduates by 10% – <i>In FY08, we had 6 PhD graduates and in FY09 we had 4 PhD graduates in civil engineering – a decrease of 2 students. In FY08, we had 4 PhD graduates and in FY09 we had the same number – 4 PhD graduates in geodetic science.</i>	
<b>Strategy 2 – Increase the number of fellowship students at the graduate level</b>	
<b>Action Item</b>	<b>Expectations</b>
Increase number of national fellowships by 10% – <i>In FY08, there was 1 national fellowship student (NASA Earth System Science). In FY09,</i>	

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<p><i>we continued with the 1 NASA Earth System Science Fellowship. In FY08 we had no International Road Federation (IRF) Scholars – in FY09 we had two IRF scholars (Hossain, Kadri). In FY08 we had 1 French Fellow (Ross) – in FY09 we had 3 French Fellows (Jin, Li, Yoon).</i></p>	
<p><i>Increase acceptance rate for university fellowships by 10% – For FY08, we had offered 5 university fellowships – only 1 accepted (20% acceptance rate). In FY09, we offered 4 university fellowships – 3 accepted (75% acceptance rate).</i></p>	
<p><b>Strategy 3 – Increase the recognition of the graduate program</b></p>	
<p><b>Action Item</b></p>	<p><b>Expectations</b></p>
<p><i>Increase the Department’s national recognition to be in the top 30 graduate programs (out of 225) – For the USN&amp;WR our department graduate program ranking in civil engineering moved up from 38 to 36 – an increase of 2 rankings. Our department graduate program ranking in environmental engineering remained the same – 39.</i></p>	




**FY10 Planned Activities for Goal #3:**





- Define quarter-to-semester graduate MS and PhD program
- Evaluate PhD degree program requirements; evaluate MS program to address ASCE Policy 465
- Increase graduate student enrollment by 10%
- Increase the number of MS and PhD graduates by 10%
- Develop geoinformation and geodetic engineering specialization track in civil engineering
- Develop a master plan for upgrading graduate student offices.
- Develop recruiting program for graduate students

**Performance Goal 4:  
Increase the diversity of faculty, staff and students**

**Strategies and Action Items**

<p><b>Strategy 1 – Increase enrollments in the undergraduate and graduate programs</b></p>	
<p><b>Action Item</b></p>	<p><b>Expectations</b></p>
<p><i>Increase number of females and minority freshmen undergraduate enrollment by 10% – In FY08, we had 70 female students and in FY09 we had 100 female students – an increase of 42%. However, the overall percentage of females increased from 15% in FY08 to 18% in FY09. In FY08, we had 24 minority students and in FY09 we</i></p>	

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had 32 minority students – an increase of 33%. However, the overall percentage of minorities increased from 5% in FY08 to 6% in FY09.	
Increase number of females, minority and domestic graduate student enrollment by 10% – In FY08, we had 20 female students (13 CE, 7 GS) and in FY09 we had 19 female students (14 CE, 5 GS) – a decrease. In FY08, we had 4 minority students (4 CE, 0 GS) and in FY09 we had 3 minority students (2 CE, 1 GS) – a decrease. In FY08, we had 26 domestic students (24 CE, 2 GS) and in FY09 we had 36 domestic students (24 CE, 2 GS) – an increase of 38%.	
Increase number of females, minority and domestic MS graduates by 10% – In FY08, we had 6 MS female graduates (1 CE, 5 GS) and in FY09 we had 7 MS female graduates (5 CE, 2 GS) – an increase of 16%. In FY08, we had 1 MS minority graduate (0 CE, 1 GS) and in FY09 we had 4 MS minority graduates (4 CE, 0 GS) – an increase of 300%. In FY08, we had 7 MS domestic graduate (5 CE, 2 GS) and in FY09 we had 16 MS domestic graduates (16 CE, 0 GS) – an increase of 128%.	
Increase number of females, minority and domestic PhD graduates by 10% – In FY08, we had 3 PhD female graduates (2 CE, 1 GS) and in FY09 we had 3 PhD female graduates (1 CE, 2 GS) – no change. In FY08, we had 0 PhD minority graduate and in FY09 we had 0 PhD minority graduates – no change. In FY08, we had 3 PhD domestic graduates (1 CE, 2 GS) and in FY09 we had 0 PhD domestic graduates – a decrease.	
Maintain diversity in staff hiring – We hired a graduate studies academic advisor and a new undergraduate academic advisor, both females.	




**FY10 Planned Activities for Goal #4:**




- Increase number of females and minorities by 10% for undergraduate and graduate enrollment
- Participate in minority recruitment events

**Performance Goal 5:  
Strengthen stakeholder relationships**

**Strategies and Action Items**



<b>Strategy 1 – Increase major gift support and annual gifts</b>	
<b>Action Item</b>	<b>Expectations</b>
Increase the number of scholarship endowments for student support by 10% – In FY08 two scholarship endowments were established	

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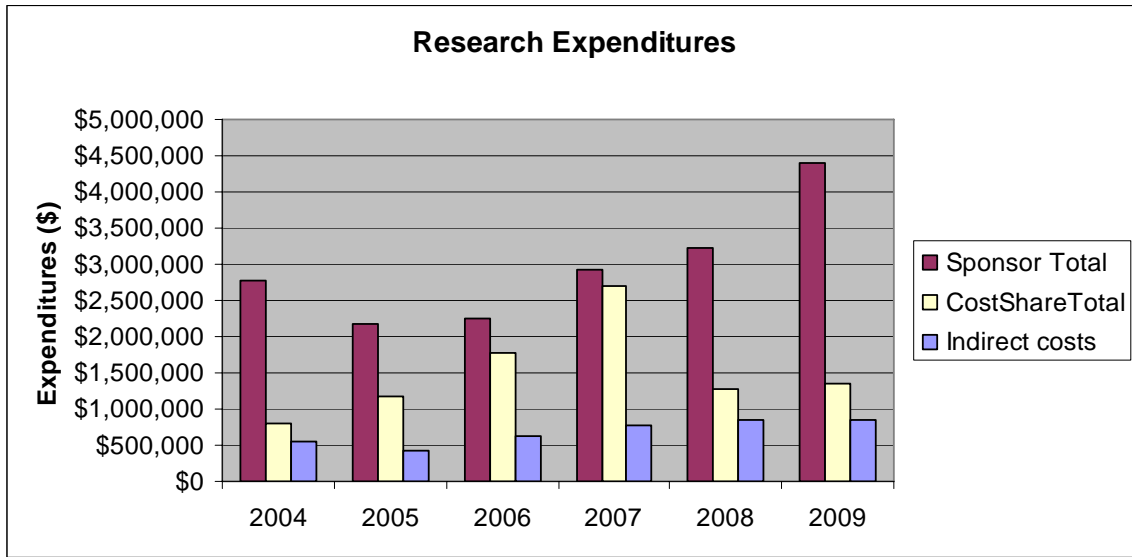
<i>(Bedford, Hunter). In FY09 two pending scholarship endowments were established (Edwards, Eisenman) and two scholarship endowments were completed (Long, Merry).</i>	
Increase development income by 10% – <i>In FY08 our development income was \$212,359. In FY09 our development income was \$177,656– a decrease.</i>	
<b>Strategy 2 – Improve visibility and reputation of the Department</b>	
Improve visibility of the Department with marketing materials – <i>In FY08, 1 newsletter was published. In FY09, 2 newsletters were published, with one newsletter focused on development.</i>	

**FY10 Planned Activities for Goal #5:**

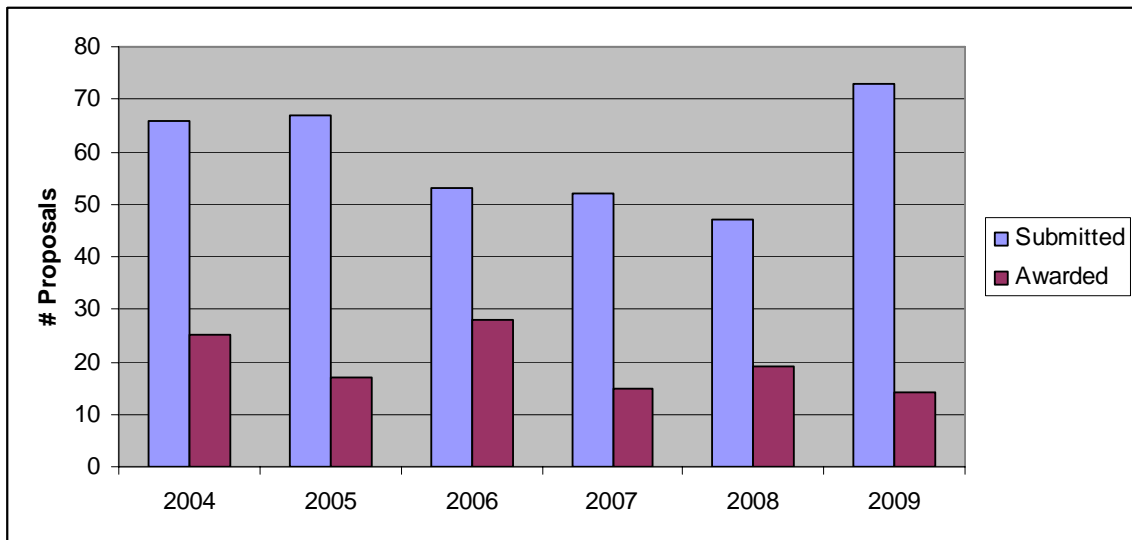
- Increase development income by 10%
- Publish two Department newsletters
- Establish a new Department Advisory Board.

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**Performance Goal #1**

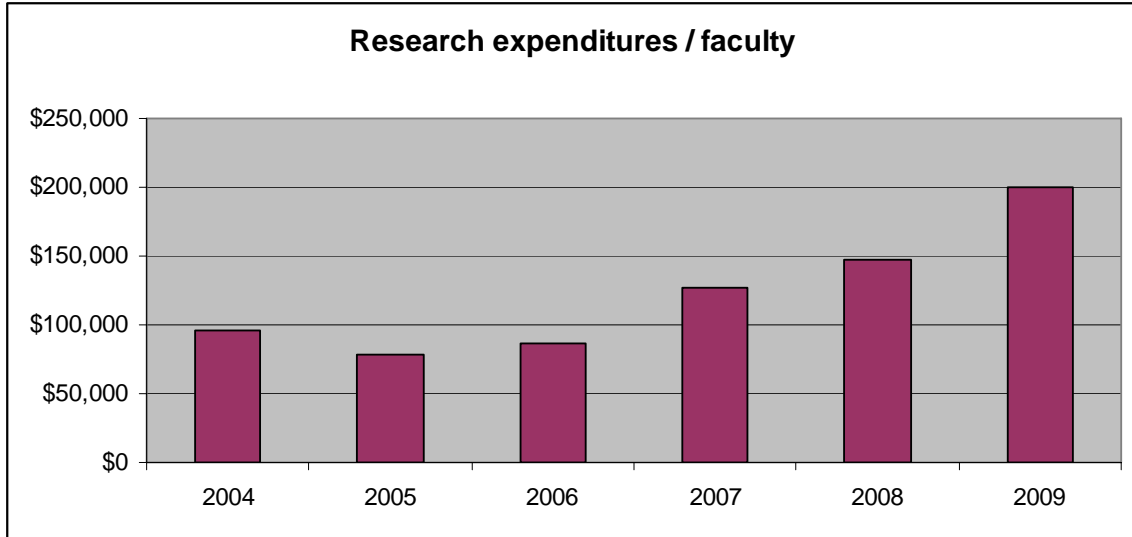


Research expenditures increased in FY09 from \$3.2M to \$4.4M – an increase of over 36%. The cost-share on research projects increased by 4%. Indirect costs on research projects decreased by 1%.



The number of proposals submitted increased from 47 to 73 proposals – an increase of 55%. However, the number of proposals awarded decreased from 19 to 14 (a 19% success rate in FY09 vs. 40% in FY08).

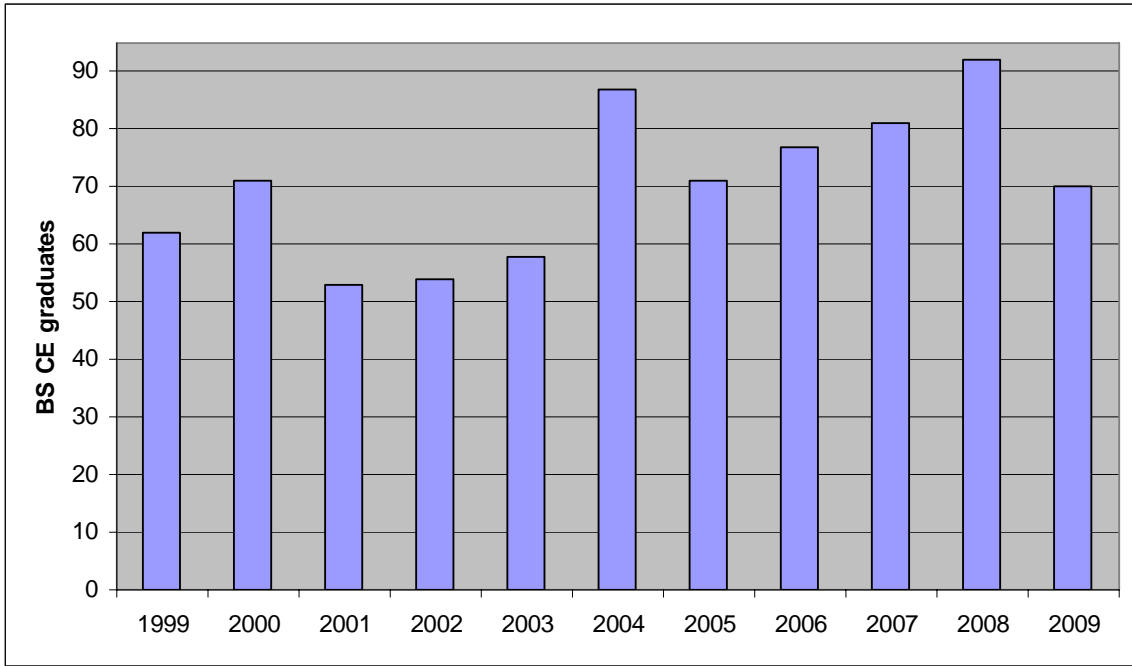
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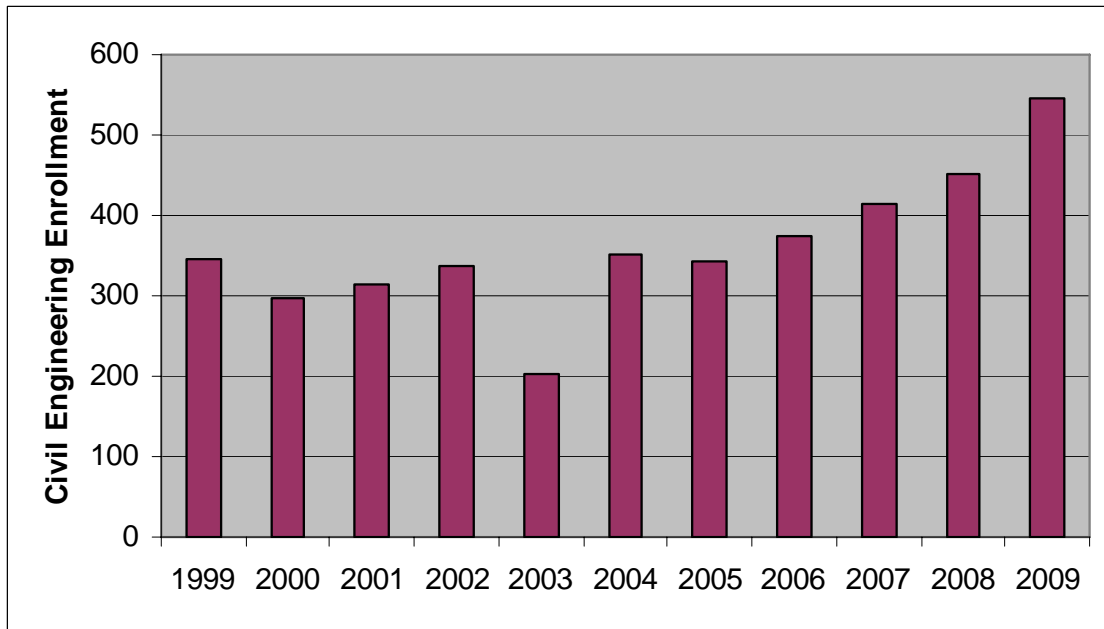
Research expenditures per faculty member increased by 36% from FY08 to FY09.

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**Performance Goal #2:**

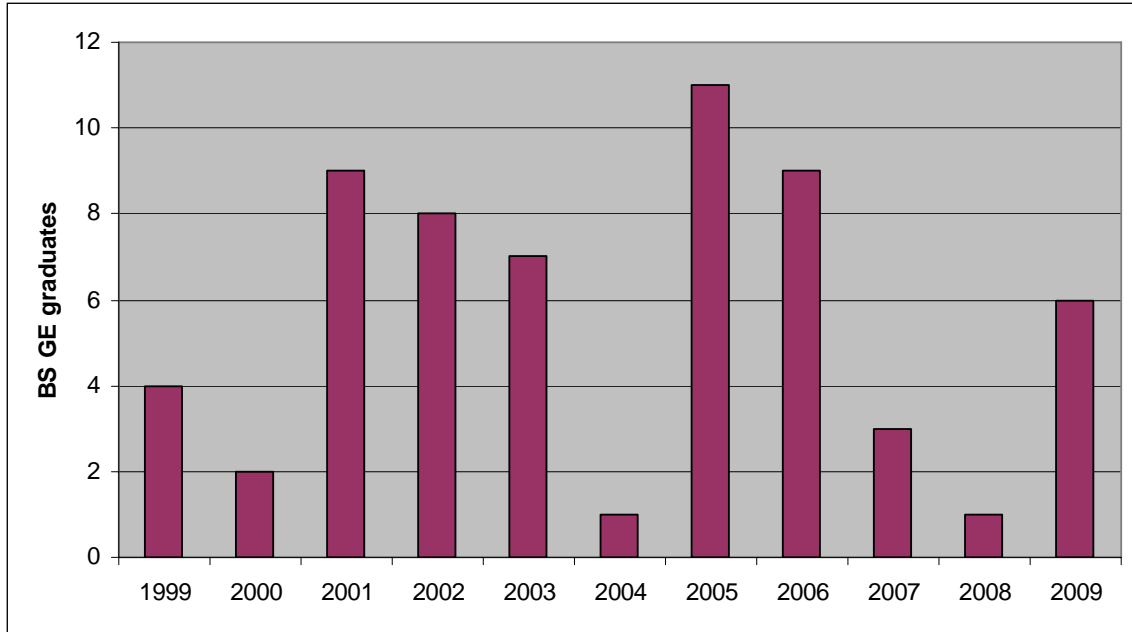


After several years of growth in the number of civil engineering BS degrees, we had 70 students that graduated with a BS in civil engineering compared to 92 the previous year.

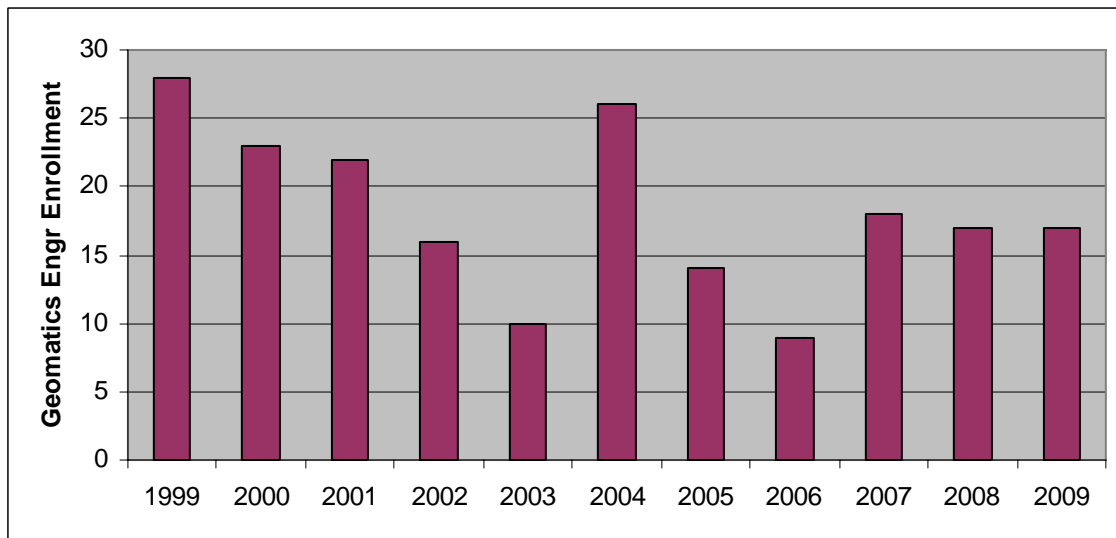


Civil engineering enrollment at the undergraduate level continues to increase. We experienced a growth of 94 additional students for Autumn 2009 when compared to Autumn 2008 – an increase of 20% growth.

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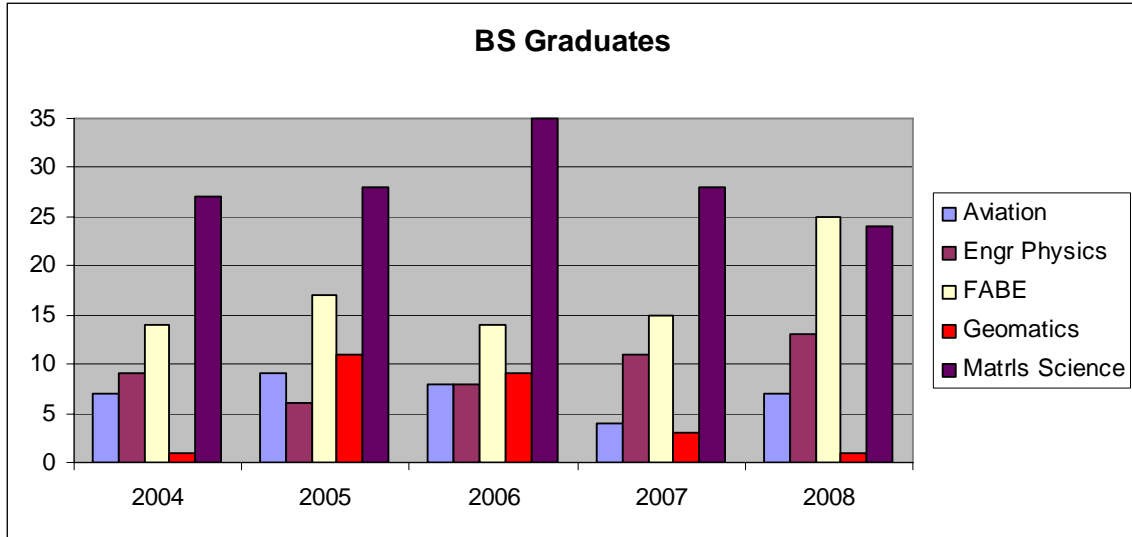


We had 6 students that graduated with a BS in civil engineering compared to 1 student the previous year. When compared to other programs in the College, the geomatics engineering program has the lowest number of graduates

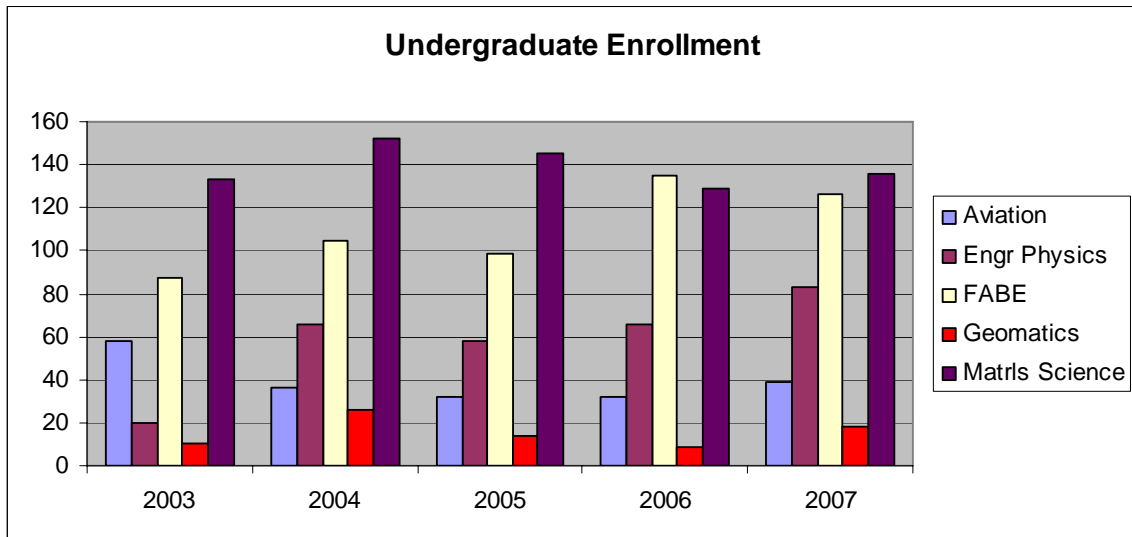


Geomatics engineering enrollment has remained low for several years.

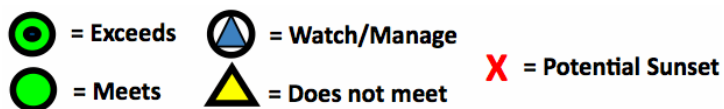
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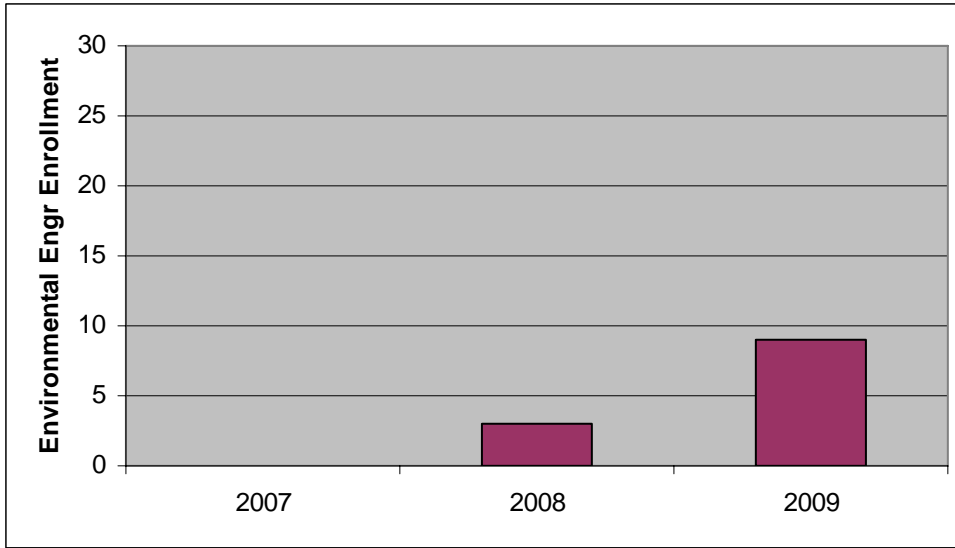


The average graduation rate for geomatics engineering is 5 students per year, the lowest in the college.








Total student enrollment is also low for geomatics engineering, averaging 15 students per year. The next highest program is aviation with 40 students in the undergraduate program

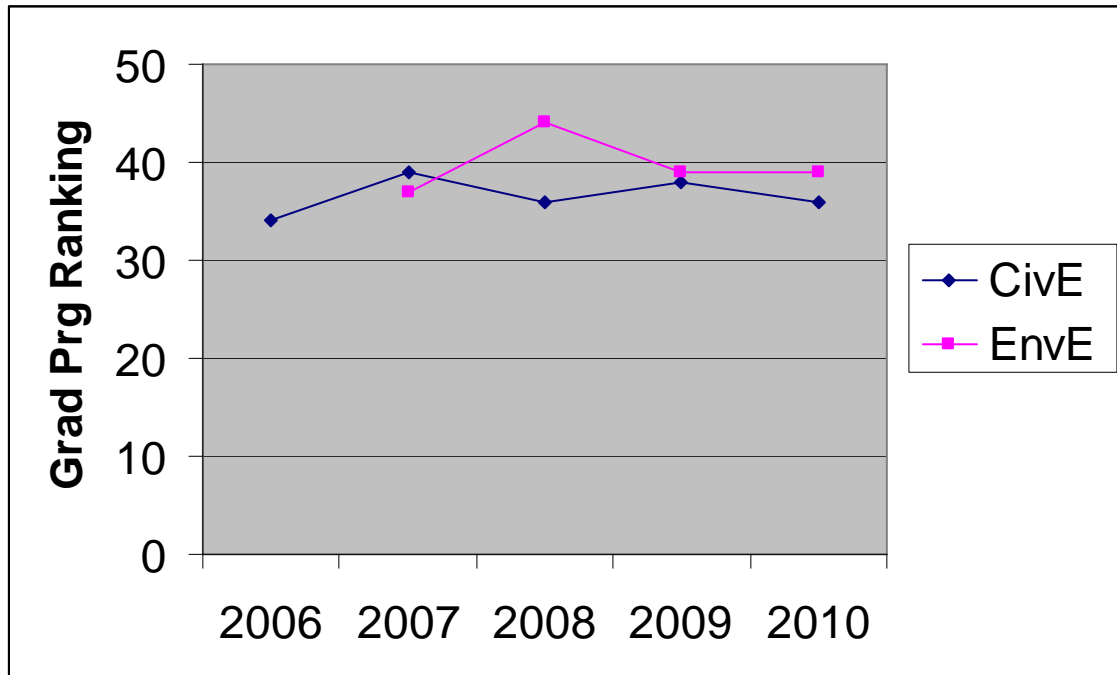









Environmental engineering enrollment increased substantially from 2007 through 2009 – growing from 3 to 9 students.

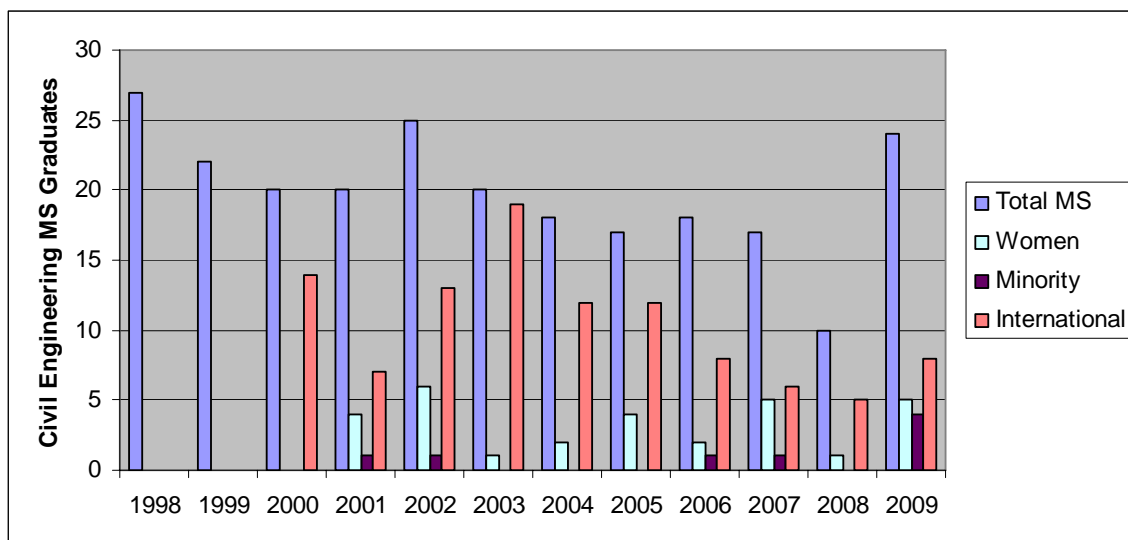
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**Performance Goal 3:**

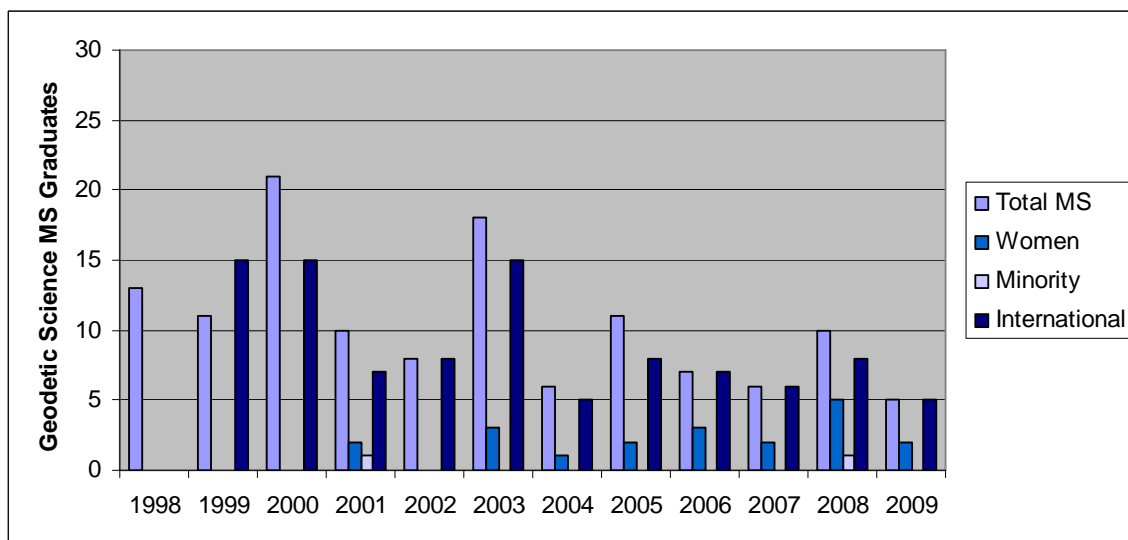


The civil engineering graduate program moved up two steps from 38 to 36 in the U.S. News and World Report rankings. The environmental engineering graduate program remained the same at a rank of 39.

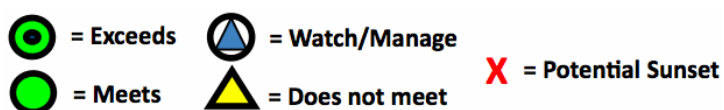
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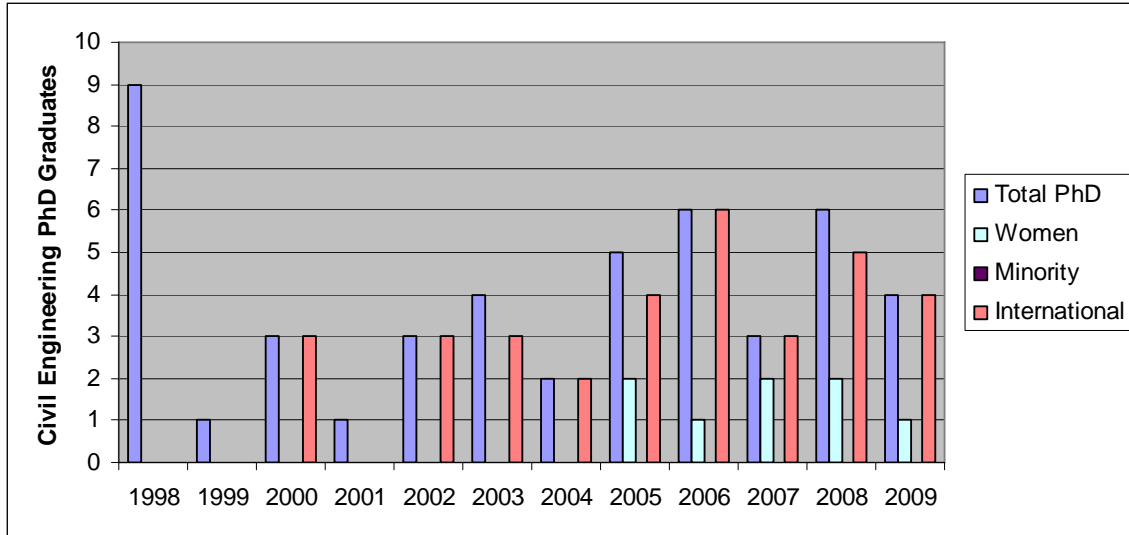


There was an increase in master’s degrees awarded in civil engineering, with 10 in FY08, compared to 24 in FY09 – an increase of 140%. There was also an increase of 17% in the number of domestic master’s degrees (50% in FY08 to 67% in FY09). The number of female MS degrees increased, with 1 in FY08 (10%) to 5 (21%) in FY09. The number of minority MS degrees also increased, with 0 in FY08 to 4 (17%) in FY09.

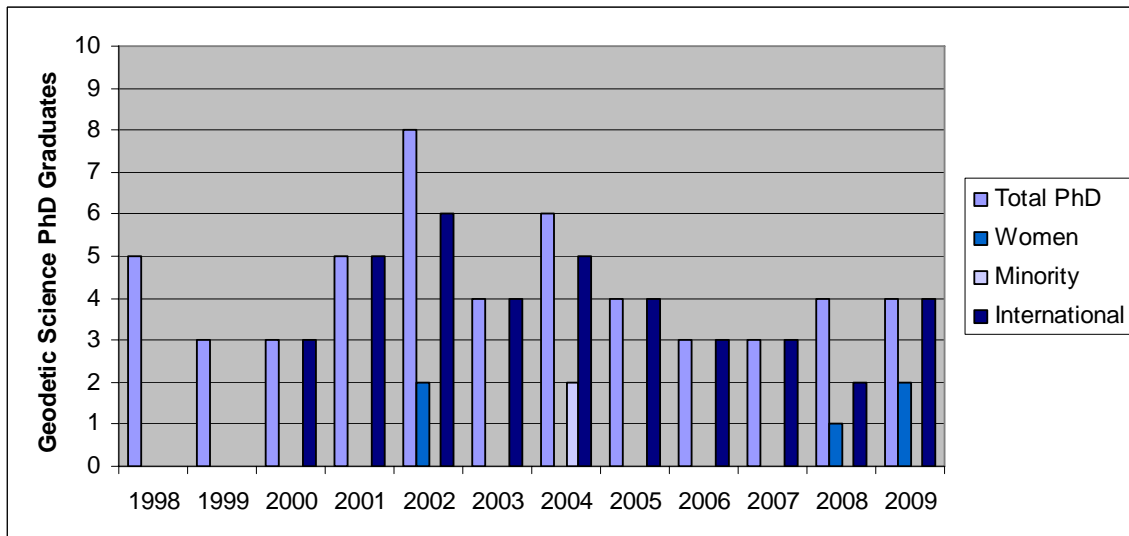


There was a decrease in master’s degrees awarded in geodetic science, with 10 in FY08, compared to 5 in FY09 – a decrease of 50%. There was also a decrease in the number of domestic master’s degrees (20% in FY08 to 0% in FY09). The number of female MS degrees decreased, with 5 in FY08 (50%) to 2 (40%) in FY09. The number of minority MS degrees also decreased, with 1 (10%) in FY08 to 0 in FY09.

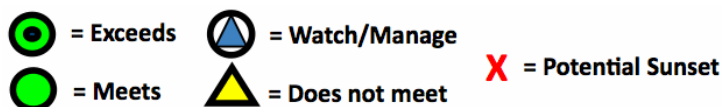


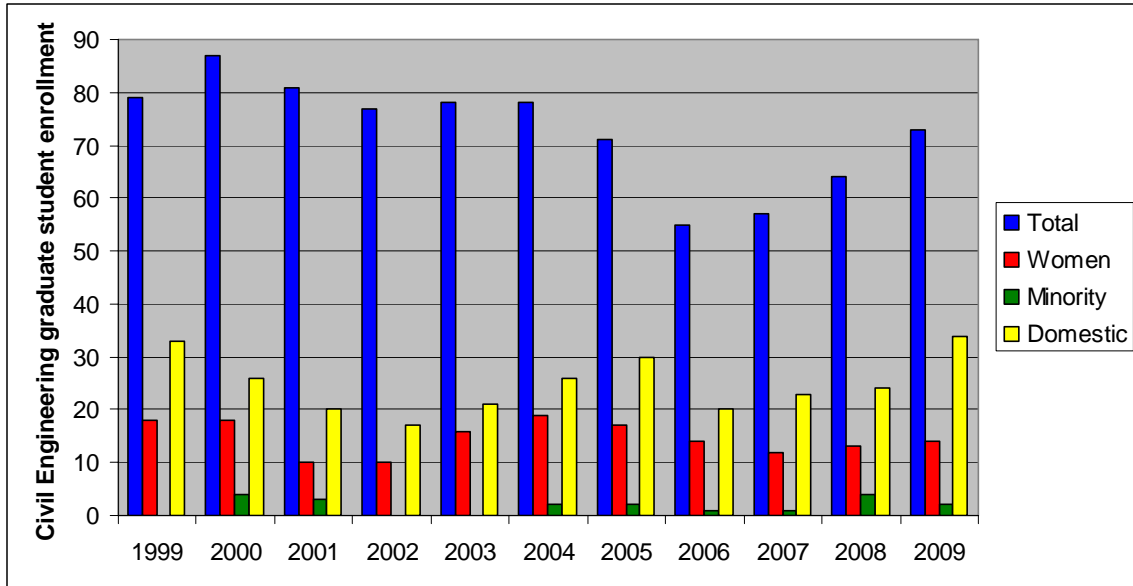


There was a decrease in PhD degrees awarded in civil engineering, with 6 in FY08, compared to 4 in FY09 – a decrease of 67%. There was a decrease of in the number of domestic PhD degrees (17% in FY08 to 0% in FY09). The number of female PhD degrees decreased, with 2 in FY08 (33%) to 1 (25%) in FY09. The number of minority PhD degrees was at 0 for both years.

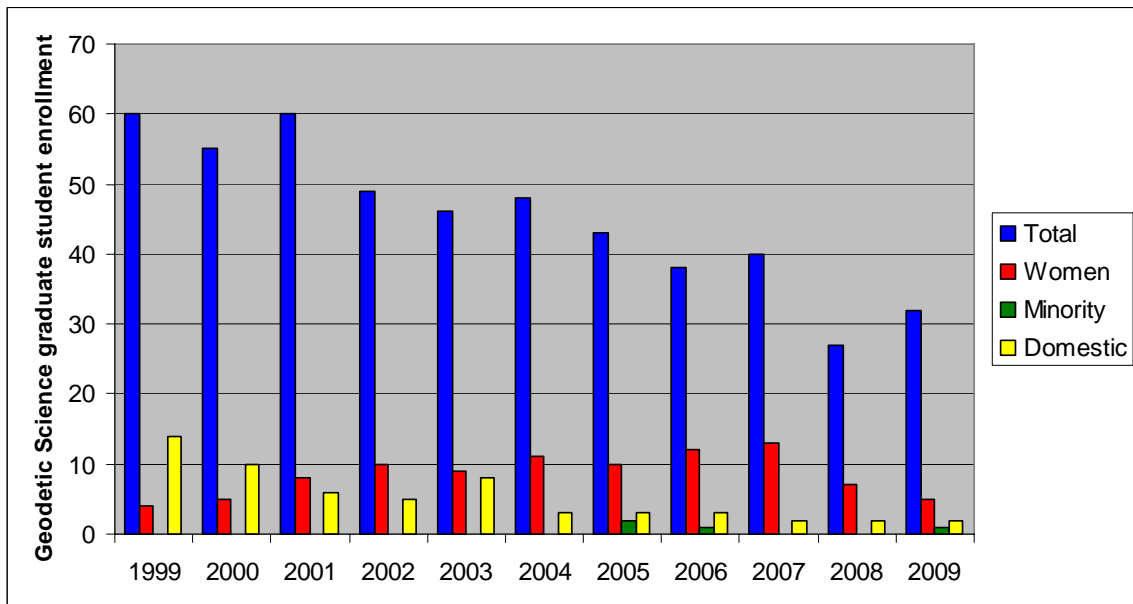


There was the same number of PhD degrees awarded in geodetic science, with 4 in both years. There was also a decrease in the number of domestic master’s degrees (50% in FY08 to 0% in FY09). The number of female MS degrees increased, with 1 in FY08 (25%) to 2 (50%) in FY09. There were no minority PhD degrees in both years.





Civil engineering graduate student enrollment.



Geodetic science graduate student enrollment

In FY08, we had 91 graduate students (64 CE, 27 GS). In FY09, we had 105 graduate students (73 CE, 32 GS) – an increase of 10%. In FY08, we had 20 female students (13 CE, 7 GS) and in FY09 we had 19 female students (14 CE, 5 GS) – a decrease. In FY08, we had 4 minority students (4 CE, 0 GS) and in FY09 we had 3 minority students (2 CE, 1 GS) – a decrease. In FY08, we had 26 domestic students (24 CE, 2 GS) and in FY09 we had 36 domestic students (34 CE, 2 GS) – an increase of 38%.

