

# The William States Lee College of Engineering Strategic Plan: 2005-2010

## I. EXECUTIVE SUMMARY

### A. Vision and Mission

The college's **Vision** puts forward our excellence as a research intensive institution that provides outstanding opportunities to the broad constituencies that we serve.

*The William States Lee College of Engineering is the first choice for students, faculty, staff and industry partners discovering, integrating, applying and disseminating knowledge.*

Our **Mission** is one of service to the region, state, and nation through the educational programs we offer and the research we conduct.

*The William States Lee College of Engineering provides high quality educational experiences for students, discovers and disseminates knowledge that benefits humankind and serves the citizens and industries of the Charlotte region, North Carolina and the nation.*

The college's vision and mission fall directly in line with the university's mission as "the only doctoral/research intensive institution" in the region and its "commitment to extend" quality educational opportunities to its students. By the very nature of the Lee College's programs, the college is poised to be a major contributor to the campus theme in Applied Science and Technology. In summary, *we turn students into engineers and ideas into reality!*

### B. Planning Process

Strategic planning is one element of a college-wide comprehensive continuous improvement process. Academic planning is a continuous process in the college, although specific new initiatives took center stage in 2004 during the college's fall Assessment and Improvement Meeting (AIM). Chairs, deans, and the faculty president met for a two day planning meeting to review progress on the previous strategic plan and to lay the groundwork for upcoming initiatives. Concurrent to this was a wide-ranging review of the college's business and student services functions provided by our support staff. This academic and business affairs planning was followed by weekly College Administrative Committee (CAC) meetings where individual topics were discussed and refined. During these meetings, the college vision, mission and goal statements were redesigned and presented to the faculty at a college meeting for discussion and further improvement. CAC also prepared an implementation plan for the college's staff reorganization. Simultaneously, each college unit/department was completing its long-range plan and submitting it to the college for review and alignment with the college plan. This was followed by the spring AIM which reviewed the draft document, made final revisions, and introduced "hot" new topics for consideration and incorporation. Ultimately, this plan was reviewed by the faculty and submitted on April 1, 2005.

### C. Major Initiatives

With projections showing college enrollment climbing to between 3000 and 3500 by the end of this planning period and a goal to increase the graduate student body to 20-25% of our enrollment, one of the greatest challenges facing the college will be to manage the rapidly growing enrollment in a way that maintains the quality of both our educational and research programs. A long range goal is to relocate all college departments/units to CRI and establish it as the engineering and technology center of UNC Charlotte. Major activities to be initiated during this planning period include:

- Complete the reorganization of the college by replacing the old model of secretarial staff with specialists in core student advising and business roles who have clearly identified duties and responsibilities.
- Plan and create a School of Engineering Technology within the college of engineering to meet its unique mission.
- Establish research teams capable of competing on the national and international scene with synergy provided by selected centers of research excellence.

- Implement the college's space plan as new and old buildings are occupied and reorganized to meet the mission of the college.
- Develop a long-range plan to bring units together on the CRI.
- Provide a first-rate educational experience for students in the UNC Charlotte/WCU joint BSEE degree program. Assist WCU with ABET accreditation for the program.
- Plan, establish and staff a Systems Engineering Department offering undergraduate and graduate degree programs.
- Plan, staff and launch a BS in construction management program; expected to quickly grow to 250 students; explore opportunities for other new programs, such as a BS in environment engineering, chemical engineering, facilities engineering, etc.
- Successfully reaccredit the Engineering Technology programs.
- Refine, streamline and improve assessment tools and processes to support long-range planning and accreditation.

#### **D. Summary of Major New Resources**

- To meet the rapidly increasing demand for engineering education while maintaining a research orientation, the college will require a significant growth in personnel, budget, and space. Projections show enrollment increasing from 2100 students today to between 3000 and 3500 by 2010. With 24 students per faculty member which is dramatically higher than comparable colleges, the first order of business will be to grow the faculty. This is also essential, if the college is to broaden its offerings and provide new degree programs such as construction management and systems engineering. The current faculty must expand by approximately 16 per year from 88 to 160. In addition, student advising services and laboratory support personnel must increase by 35%. Based on enrollment projections for this planning period,
  - MEES and ECE should increase to about 35 faculty.
  - CE should grow to 25.
  - ET should grow to 35.
  - Freshman instructors should increase to 8.
  - Proposed Systems Engineering department should increase to 10.
  - EPA Faculty Associate advising/instructional staff must increase by 10.
- Growth in graduate students and undergraduate instruction, particularly laboratories, and a desire to increase our research productivity will require a substantial increase in TA positions and tuition waivers. This will require a doubling of available TA positions (\$500k + tuition).
- A major reorganization of the college has enhanced student advising with the addition of Student Services Specialists (SSS). To finish this project, three additional SSS must be added immediately; one to backfill in ECE, one in ET and one for freshman. During the planning period a minimum of two more will be needed to accommodate student growth.
- Systems Engineering will require an operating budget, a Business Services Specialist, a Student Services Specialist, five additional faculty and support for eight teaching assistants.
- BS in Construction management will require four faculty members and a Student Services Specialist for advising.
- To support research, a technician should be provided in each department and Engineering Computing support staff must increase from 7 to 12.
- Each research Center should be provided with a secretary and an operating budget.
- Yearly Lab and Computer Equipment allocation must increase by \$350k to support growth.
- Operating funds must increase 12% per year.
- Two engineering laboratories on the CRI campus should be added during the next bond program to accommodate enrollment growth. Space for ECE, Biomedical Engineering, and Freshman Programs/Project Space must double and a new Sustainable Construction Research Laboratory will be required.

## II. ENVIRONMENTAL SCAN/UPDATES

### A. Progress

Major developments during the past planning period include:

- A comprehensive continuous improvement process was developed that enabled successful re-accreditation of the four engineering programs in 2004 and has positioned ET for a successful re-accreditation in fall 2005.
- Launched 4-year ET degree programs and enrolled 81 freshmen in its first year (fall 2004).
- Successfully began the INES Ph.D. program with A&S enrolling a dozen new Ph.D. students.
- Recruited three faculty members and began a MS in Engineering Management as the seed for the proposed new Systems Engineering Department.
- Added a BS in Computer Engineering and several faculty; the program has quickly grown to 150 undergraduate students.
- Began a COE FLC that has been expanded to 140 students.
- Started an Engineering Leadership Academy with funding from Philip Morris.
- The college continued its commitment to strong research programs and during the past three years averaged about \$6M/year in new research awards.
- Proposals for two new university-wide research centers were submitted to the provost: the Institute for Biomedical Engineering Systems and the NC Motorsports and Automotive Research Center. A third college-based center, The Center for Lean Logistics and Engineered Systems, was approved within the college.
- A yearlong comprehensive study of our support organization was conducted by HR with help from a consultant and college staff. After review by CAC, reorganization began in fall 2004 with an emphasis on providing greatly enhanced student advising.

### B. Environmental Scan

The College strengths are its dedicated faculty and staff and our proximity to one of the fastest growing regions in the country. The two biggest challenges are to grow personnel and space fast enough to meet the rapid enrollment growth while simultaneously expanding our research agenda. Examining peer institutions reveals that student-faculty ratios for engineering programs are often in the 16-19:1 range (Table 1). Today the Lee College finds itself with a ratio of 24:1 and is steadily increasing. To be viable, our goal is to drive our ratio down below 20:1 during this planning period.

Table 1. <sup>†</sup>

Engineering Program	Students/Faculty	FTE Students/Faculty
USC - Columbia	21.1	13.6
Virginia	14.9	
Clemson	13.6-19.7 <sup>∨</sup>	
UMASS	16.8	
USF		14.5
Virginia Tech	19.4	
UAB	14.6	
Cincinnati	11.1	9.8
NCSU	20.5	
Univ. of Kentucky	15.9	
<b>Charlotte</b>	<b>23.8</b>	<b>21</b>

<sup>†</sup> Engineering programs with BS, MS & Ph.D. programs; data gathered spring 2004.

<sup>∨</sup> Data from two sources: SACS Self-study data and college website.

Limited available space will remain a weakness. New space currently coming online is meeting needs that existed 10 years ago and some units continue to find themselves with little room for expansion. This is particularly severe for ECE. This must be addressed by adding space and careful management of existing facilities. It is likely that accommodating enrollment growth will require the combination of increasing the faculty size, enrollment management, the addition of space, and careful facilities management.

To be properly positioned for the future, the college must assess and understand industry's rapidly changing need for research and engineering talent. The impact of out-sourcing, off-shoring, emerging fields, and global competition in industry and in higher education needs to be understood in order for the college to grow its educational and research programs in the best directions.

Growth of the southeastern U.S. and the arrival of new companies provide our faculty and students with numerous new opportunities, and the college must be poised to capitalize on these opportunities. The proven performance of the Center for Precision Metrology and the formation of the Optoelectronics Center, IBES, NCMARC and other research centers will provide faculty with opportunities that should fuel our research engine. The new UNC Charlotte/WCU joint degree program provides a glimpse of what might be done to organize a Western Regional Universities Consortium that offers seamless inter-institutional degree programs.

The college has matured to the point that each of its engineering programs is now participating actively in a Ph.D. program. Offering additional Ph.D. programs will require the college to add new units or spin-off successful sub-disciplines. Adding programs at all levels will also be necessary for the college to successfully compete with regional institutions for prospective students. Furthermore, expansion of the college in size and breadth will be necessary if the college is to be perceived as a major engineering college at a regional and national level.

The college continues to struggle to significantly expand the number of underrepresented students in the student body. Women represent about 12%, African-American about 10%, and Native Americans and Hispanics are just a few percent. These modest percentages, common in most engineering colleges, will continue to require an aggressive recruiting effort. Retention of engineering students is also a continuing challenge that must be overcome. Technically trained graduates are a critically important part of our society. Furthermore, it is simply not cost-effective to invest time, energy, and resources in students who never graduate.

One threat to the college is the rapidly changing global economy and our inability to respond quickly. The steady decrease in domestic manufacturing and the continual rise of the service industry will have major implications for future engineering opportunities. Service-related engineering opportunities may lie more in project management than in more traditional disciplines. With the laws of nature being universal, off-shoring of many conventional design jobs may follow the course of the IT industry. However, technical career opportunities will likely continue to exist in cutting-edge industries that are focused on designing value-added products. It will also be increasingly important to foster skills in our students that can contribute and drive their innovative ability and interest.

A second threat may come from distance education. Major sites offering distance education can be located anywhere in the world, and these could threaten conventional on-site education. For example, if an institution with an excellent reputation or one that can offer a more convenient mode of education moved into this market, it could impact enrollment projections and alter the course of traditional engineering education.

### III. NEW STRATEGIC GOALS, ACTION PLANS, AND PERFORMANCE OUTCOMES

The college goals are crafted to address the vision and mission of the college as they pertain to each of the college's constituent groups: students, faculty, staff and industry.

A. **COE Goal I:** *Provide a safe, friendly and non-discriminatory learning environment that prepares our students for success upon graduation and encourages life-long learning.*

B. University Goals 1, 6, 7 and 8 address the education of our students in the broadest of terms and encompass the first college goal.

#### C. Action Plans

1. Use assessment results from continuous improvement process (ICAP, FAIT, AIM, SPART<sup>™</sup>) to drive enhancements.
2. Build student advising infrastructure.
3. Continue to refine and improve the freshman year experience.
4. Begin a program in construction management.
5. Launch a Department of Systems Engineering and corresponding degree programs.
6. Capitalize on new COE Development Officer to attract additional sources of funding.

#### D. Measures:

1. ABET accreditation report.
2. SPART surveys questions on learning communities, program goals and objectives.
3. ENGR/ETGR 1201 Surveys and retention rates; FLC data; freshman GPA.
4. Enrollment in Construction Management degree program.
5. Formation of the Systems Engineering Department; approval and enrollment in programs.
6. Number of development contacts.

E. Assessment Schedule: ABET reports on the normal cycle; Surveys annually, yearly development report.

F. Person/Group Responsible: ABET self-study by Departments and College; Surveys by SPART/OSDS<sup>™</sup>; ET department for BSCM; Dean's Office and EGMT faculty for new department.

#### G. Performance Outcomes:

1. Positive accreditation action by ABET.
2. 75% of the COE students respond favorably to SPART survey questions.
3. 90% of the freshmen are satisfied with advising and respond favorably to the SPART survey question on COE community; 80% of freshman surveyed in 1201 feel the experience was positive.
4. Freshman-to-sophomore retention rate increases to 60% during planning period and sophomore-to-graduation rates increase to 85%.
5. Initially enroll 40 students in BSCM and grow to 200+ students.
6. Formation of Systems Engineering department, creation of degree programs, and initial enrollment of 40 students.
7. Benchmark development contacts and steadily increase contacts each year.

#### J. Resources Required:

1. Increase faculty to meet enrollment growth and drive student-faculty ratio below 20.
2. Provide Student Services Specialists (one per 200 students) to enhance advising.
3. Add freshman Faculty Associates in proportion to student enrollment growth (expected 2 minimum).

<sup>™</sup> ICAP= Individual Course Assessment Process; FAIT=Focus Area Improvement Team; AIM=Assessment & Improvement Meeting; SPART=Strategic Planning & Assessment Resource Team; OSDS=Office of Student Development and Success.

4. Hire four faculty for Construction Management.
  5. Provide space, office staff, and six new faculty for Systems Engineering.
  6. Increase scholarships available through development efforts.
- A. **COE Goal II:** *Attract and retain a diverse community of teaching scholars to educate students; generate, apply, and disseminate new knowledge; and contribute to economic development and growth.*
- B. Providing support for faculty as described in University Goals 2 & 5 lies at the heart of the corresponding college goal to maintain a productive community of scholars with strong research programs.
- C. Action Plans
1. Successfully start and promote the Institute for Biomedical Engineering Systems (IBES), the NC Motorsports and Automotive Research Center (NCMARC), and the Center for Lean Logistics and Engineered Systems (CLLES).
  2. Launch a Department of Systems Engineering and its research programs.
  3. Recruit faculty to strengthen research programs.
  4. Prepare a proposal for a Sustainable Construction Research Center.
  5. Transition into new and old space with careful management of available space.
  6. Secure funds to have a faculty member serve as Associate Dean of Research with a 2-3 year term and the primary role of mentoring young faculty.
  7. Support appropriate reassignment of duty requests and attendance by faculty at professional development workshops.
  8. Explore opportunities with new degree programs, such as environmental engineering, facilities engineering, etc.
  9. Develop a plan to relocate departments and centers on CRI
- D. Measures
1. Center reports to Office of Research.
  2. Department of Systems Engineering formed and degree programs initiated.
  3. FTE Student/faculty member ratio.
  4. Graduate student enrollment.
  5. New construction center proposal.
  6. Creation of a COE Associate Dean position.
  7. Reassignment of duty activities; workshop participation.
- E. Assessment Schedule: Annual reports.
- F. Person/Group Responsible: Center Directors, Dean's Office.
- G. Performance Outcomes
1. Average funding per faculty member in Centers greater than college average.
  2. New Systems Engineering faculty in place and 150 students enrolled by end of period.
  3. FTE Student per faculty member decreases below 20 by end of period.
  4. Formation of centers with identifiable faculty and space.
  5. Junior faculty mentoring program established by COE Associate Dean for Research.
  6. Support/encourage two reassignments each year and participation by each Assistant Professor in at least one teaching workshop during first three years.
- J. Resources Required
1. Office staff for each center and an operating budget.

2. Office staff, space in CARC, and six additional faculty members for Systems Engineering.
  3. Add 16 new faculty/year to support enrollment growth and new programs.
  4. Space for construction research center, office staff, and operating budget.
  5. Equipment and renovation funds for CARC and Smith; an increase in yearly equipment budgets by 20% per year during period (\$350k total) and an increase in operating budget by 12% per year.
  6. A faculty stipend (\$15k) for serving as Associate Dean of Research and \$15k to department to reduce Associate Dean's teaching load.
  7. Add an additional building on the CRI campus to bring units together and expand research and educational programs.
- A. **COE Goal III:** *Develop a staff of dedicated and trained professionals to continuously improve the infrastructure that supports the mission of the college.*
- B. Supporting, assisting and cultivating an effective staff and capable infrastructure described in University Goals 4 and 5 forms the basis for this college goal.
- C. Action Plans
1. Establish and train Student Services Specialists (SSS) in each unit to advise, guide, and track our students.
  2. Reorganize and improve business functions, such as budget and personnel management, to be performed by Business Service Specialists (BSS).
  3. Develop productive Focus Area Improvement Teams (FAIT) and their leadership for SSS and BSS operations.
  4. Develop a distributed Laboratory Services Organization with a matrix structure to maximize productivity and flexibility.
  5. Improve engineering computing services (Mosaic) by staying abreast of faculty and student needs.
- D. Measures:
1. Survey of advising performance.
  2. FAIT team leader meeting minutes and semester reports to CAC.
  3. Department chairs provide evaluation/report of Lab support performance.
- E. Assessment Schedule: Annual surveys, semester reports from FAIT, yearly chair evaluations.
- F. Person/Group Responsible: SPART, FAIT team leaders, chairs.
- G. Performance Outcomes
1. 85% of the COE students are satisfied with advising; Chairs and FAIT leaders rate advising as satisfactory.
  2. All business processes documented and inefficiencies eliminated. Chairs and FAIT leaders satisfied with business specialist performance.
  3. Monthly FAIT meetings ongoing.
  4. Lab staff duties documented by departments in consultation with Lab Manager; all chairs satisfied with support from technicians.
  5. 90% of the college's faculty report that engineering computing (Mosaic) meets their needs and 80% of the students find it meets their needs (as reported on SPART surveys).
- J. Resources Required
1. Three Student Services Specialists ASAP (one to backfill in ECE, one in ET and one for Freshman). Increase in SSS positions and EPA advising/instructional staff as enrollment continues to grow (likely need for three more SSS and five EPA Faculty Associates advising/instructional staff over planning period to match enrollment growth).

2. One additional support staff for external grants and contracts.
  3. Addition of one technical lab staff member per year during period and the addition of one computer technical staff member every year.
  4. An increase in the college's equipment budget by \$350k.
- A. **COE Goal IV:** *Support industry by providing well prepared engineering graduates and access to the specialized expertise of the faculty.*
- B. University Goal 2 describes the university's research thrust and ability to address needs of the region and it overlays the college goal to support industry.
- C. Action Plans
1. Operate Industrial Advisory Boards in each unit.
  2. Increasing graduation rates.
  3. External funding increasing steadily in proportion to faculty growth.
  4. Formation of two clearly identifiable research teams in each department.
  5. Creation of research centers.
  6. Start Industrial Solutions Lab (ISL) to attract industry projects to enhance the student experience.
- D. Measures
1. Meetings of Industrial Advisory Boards.
  2. Graduation and retention rates.
  3. External funding level.
  4. Identifiable faculty research groups.
  5. Research center reports to Office of Research.
  6. Student projects obtained by ISL.
- E. Assessment Schedule: Department Annual report; yearly examination of graduation/retention rates; yearly external awards report; annual reports of centers.
- F. Person/Group Responsible: Chairs, SPART/Dean's Office, Center Directors/Research Office.
- G. Performance Outcomes
1. Biannual Industrial Advisory Boards meeting in each unit.
  2. Increase sophomore to graduation rates to 85% and freshman-to-sophomore retention to 60%.
  3. Yearly research and scholarship awards of \$100k/engineering faculty member and \$25k/engineering technology faculty member.
  4. Formation of research teams in each department.
  5. Creation of research centers.
  6. 20 ISL student projects/year.
- J. Resources Required
1. Additional student advisers and freshman faculty as described earlier.
  2. One secretarial staff and operating budget for centers.
  3. Increased COE operating budget to support industrial relations.
  4. Funds for Industrial Solutions Lab Director and secretary; space for ISL.
- A. **COE Goal V:** *Promote the accomplishments of the college's students, faculty, alumni and programs.*
- B. Not only is it essential to accomplish each of the goals above, but it is important to disseminate the accomplishments of the university and college as articulated by University Goal 9.
- C. Action Plans
1. Publish newsletters and a biannual report.



2. Prepare videos for Channel 22 and distribution.
3. Update department websites every year.
4. Update program literature to reflect program changes and additions.

D. Measures

1. Number of newsletters and a biannual report.
2. Number of videos prepared.
3. Department website feedback from students and prospective students.
4. Current degree program literature.

E. Assessment Schedule: Yearly.

F. Person/Group Responsible: Mike Hermann, Chairs.

G. Performance Outcomes

1. Three newsletters per year and a biannual report.
2. Two videos prepared and shown on Channel 22 each year.
3. Error free COE and department websites.
4. Degree program literature available on request.

J. Resources Required: COE operating budget must be increased by \$50k to support Public Relations.

**APPENDICES:**

**IV. UNIT ENROLLMENT PLAN**

Two enrollment projections are shown in Figure 1. One is a linear extrapolation from the past seven years, and the other includes added growth from the recently added lower division in Engineering Technology. Linear extrapolation indicates that the student body will increase to 3000 by the end of the planning period. The recent addition of a lower division in ET and other proposed new ET programs suggest total enrollments nearer to 3500. This represents an enrollment increase over current levels between 43% and 67%. The COE believes that it is in the best interest of UNC Charlotte and the Charlotte region to support this enrollment growth. The increased funding received from the university system for engineering students is added motivation to support growth in the college. However, this will require the addition of substantial faculty and staff as described in this plan. An added benefit of growing to 3000+ students will be to place the Lee College on the radar screen as a major college of engineering. This, in turn, will contribute to recruiting the best students, particularly graduate students. However, in the absence of an adequate expansion of faculty, staff, and budget, an enrollment management plan will need to be discussed and adopted to control enrollment.

One goal is to increase graduate enrollment from the current level of 16% of the student body to 20-25%. Also note that substantial growth of enrollment in Engineering Technology can be anticipated with the recent addition of the lower division. This growth might lead to an underestimate in the projection shown in Figure 1. Furthermore, it may be necessary to restrict access to the college by undecided students since data show that few ultimately graduate in engineering, but they consume substantial instructional resources in the lower division.

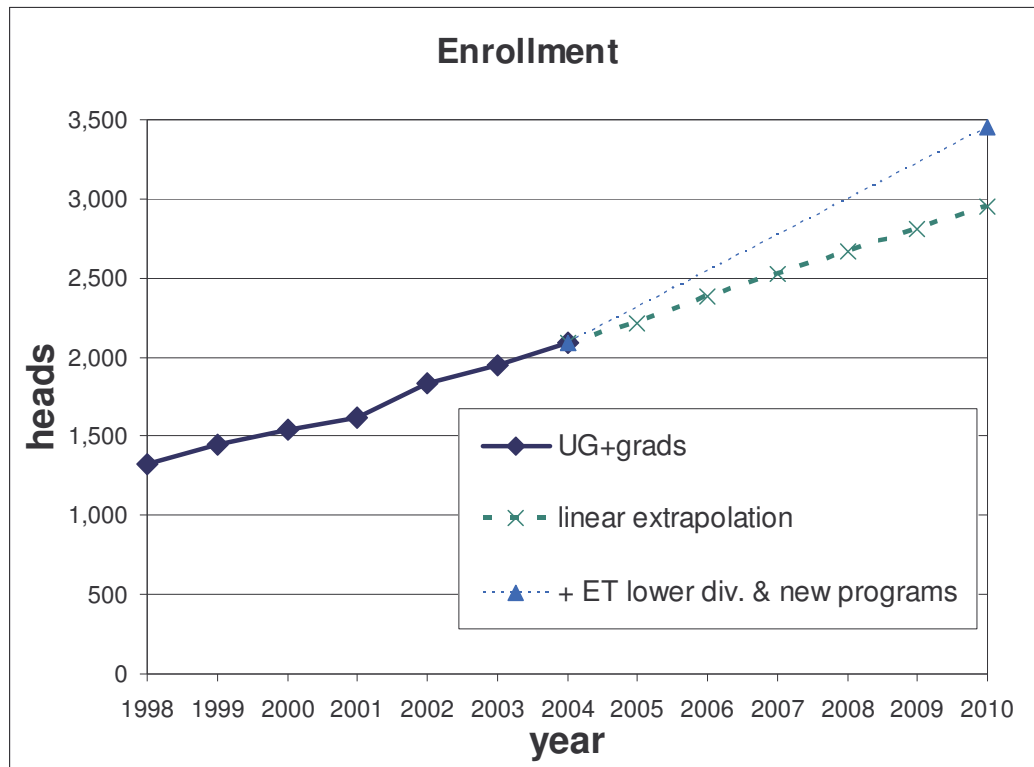


Figure 1. College enrollment trends through 2004 and projection to 2010.

**V. STAFFING PLAN**

The number of faculty and staff must increase significantly to accommodate the dramatic enrollment growth that has occurred during the past seven years and to support the growth that is projected during the planning period. To be competitive with regional engineering colleges, which generally have a student-faculty ratio in the 16-19 range, the Lee College must reduce its current student-faculty ratio of 24. The enrollment plan, which proposes to add 15 new faculty members per year, will begin to bring the college in line by reducing the ratio to about 20 by the end of the planning period.

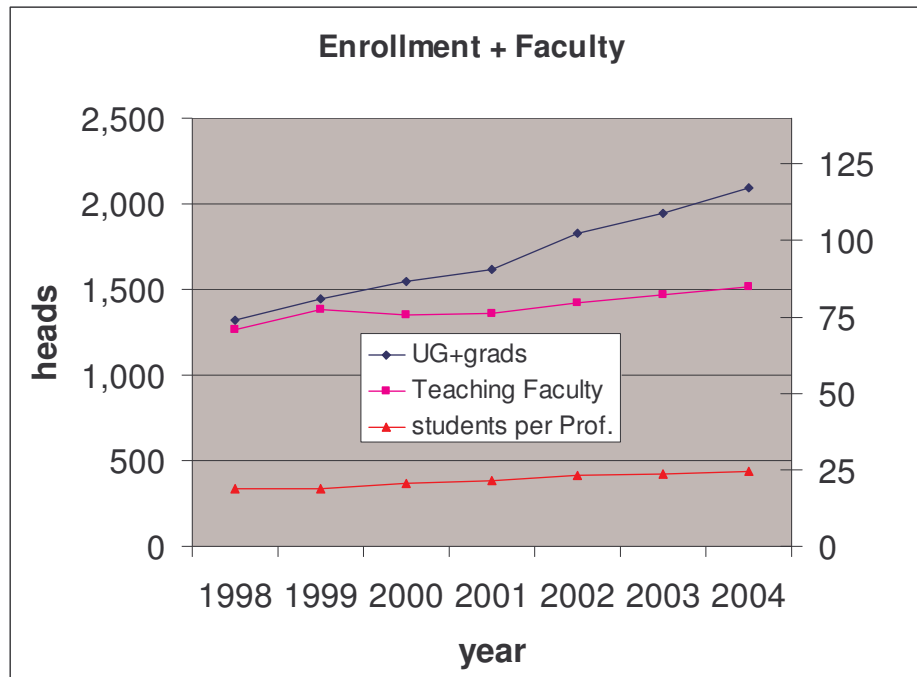


Figure 2. Faculty growth compared to enrollment growth and students/faculty ratio.

**New Faculty**

	2005-06	2006-07	2007-08	2008-09	2009-10
<b>Professors</b>					
CE	2	2	2	2	1
ECE	2	3	3	3	2
ET	3	3	2	2	1
ME	3	3	3	2	2
Sys. Engr.	2	2	0	1	2
Endowed Prof.	0	0	1	0	1
Fac. Assoc. (teaching)	1	1	2	2	2
Fac. Assoc. (advising)	0	1	1	1	2
Part-time Faculty	2	0	0	1	1
Visiting Faculty	0	1	1	1	0
<b>TOTAL</b>	<b>15</b>	<b>16</b>	<b>15</b>	<b>15</b>	<b>14</b>

**New Staff**

	2005-06	2006-07	2007-08	2008-09	2009-10
Business Services		1	1	1	
Student Advising	2	2	2	1	0
Engr. Computing	1	1	1	1	1
Lab Technicians	1	1	1	1	0

VI. **GOAL ALIGNMENT MATRIX**  
- see attached

## VII. ASSESSMENT SCHEDULE

<i>Assessment</i>	<i>Frequency</i>	<i>Comments</i>
SPART - Student & Faculty Survey	Each spring	Learning communities, advising, overall perceptions
SPART – Employer Survey	Biannually	Program education objectives, industry perceptions
ABET Self-study	Every 3-6 years	Team visit
Individual Course Assessment (ICAP)	Each semester	Program outcomes assessment
Focus Area Improvement (FAIT)	Annually	Selected review areas of program outcomes
Program Objective Evaluation (PROBE)	Biannually	Program reviews with assistance from Advisory Boards and survey instruments.
Assessment & Improvement Meetings (AIM)	Tri-annually	College staff reviews plans/progress at 3 workshops.
COE Retention	Annually	Promotion rates by classification and demographic group
Graduation rates	Annually	Graduation rates by classification and demographic group
COE at a Glance	Annually	Enrollment trends, student/faculty ratio, graduation rates
Mentoring, SI, MAPS Program	Annually	Academic performance, retention, overall satisfaction
Recruiting Measures	Annually	Demographics, SAT, growth trends, etc.
Scholarship Awards and Donations	Annually	Development Office
FLC	Annually	Learning community survey, academic performance, retention
FE Exam Results	October and April	Program outcomes
Research Award Reports	Annually	Provided by Office of Research
Research Expenditure Reports	Annually	COE Contracts and Grants Office
Center Reports	Annually	Conducted by Office of Research
Graduating Student Survey	Annually	Learning communities, advising, overall perceptions of graduating seniors; program outcomes
Graduating Student Salaries	Annually	COE, regional and national statistics
Assessment process	On-going	Feedback from CAC (weekly meetings and three AIM sessions per year)