1998/99 - 1999/00 PLANNING AND ACCOUNTABILITY REPORT

December 1998

COLLEGE OF ENGINEERING AND APPLIED SCIENCES

Florida International University

TABLE OF CONTENTS

COLLEGE OF ENGINEERING
1998-2000 PLANNING AND ACCOUNTABILITY REPORT

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Date Submitted:	December 3, 1998

PART I: MISSION, ORGANIZATION, TRENDS AND GOALS

1. MISSION

The College of Engineering supports the mission of Florida International University to serve the people of Southeast Florida, the state, the nation and the international community by imparting knowledge through excellent teaching, creating new knowledge through research and fostering creativity and its expression. The College intends to provide a quality educational opportunity for students that encourages leadership, creativity, achievement, ethical behavior, the habit of individual inquiry, and the capacity for lifelong learning. The College is committed to supporting economic development by providing graduates and new knowledge from research that improves the quality of life, meets the needs of business and government, and contributes to the economic competitiveness of Florida and the nation.

2. ORGANIZATIONAL ISSUES

See the enclosed organizational chart.

1. EXTERNAL TRENDS

What external trends may influence your programs or operations over the next five years?
How do you plan on adjusting to these?

The most important factors which will influence teaching, research and service in the College of Engineering, include the following:

- Information Technology
- Restructuring Engineering Education - National Initiative
- Funding Levels for Sponsored Research
- State Funding Levels (E&G)
- Job Market for Engineering Graduates

Information Technology: Advances in technology will greatly influence the delivery of engineering education. High bandwidth communication lines will be available at businesses and homes. It is anticipated that this will substantially increase the demand for credit and non-credit courses and will also increase the competition for providing these courses. Off campus learning will be a big potential market. The College of Engineering will have to increase its Distance Learning capacity substantially. The University Administration must provide full funding to the FEEDS (Florida Engineering Education Delivery System) center at FIU. FEEDS and other distance learning initiatives will become revenue-enhancing operations in times to come. It is imperative that the college moves forward in enhancing its education delivery options to remain competitive.

Restructuring Engineering Education: There continues to be a national initiative to restructure engineering education to accommodate the needs of the learner, the needs of the employers and the ever-changing technology on with engineering is based. This initiative will continue to have a large impact on the undergraduate engineering programs in the College. This major initiative, in which FIU is actively participating, will reshape engineering education during the upcoming decade. Some of these initiatives include:

- Curriculum and courses are being modified continuously to include more software implementation – an expectation that employers have from newly hired engineering graduates.

- Continuing education programs are being developed to help existing employees in acquiring the latest knowledge and skills.

- Most engineering graduates are placed in design, development or project management positions in industry. Practice-oriented curricula and non-thesis MS degrees are being explored to meet industry needs.

- Asynchronous delivery of engineering education.

Sponsored Research Funding levels: Funding levels for research continues to be impacted by downsizing within the funding agencies and restrictions on affirmative action programs. Funding at the National Science Foundation, a primary University research funding arm, continues to expand while funding for universities by other agencies, has not realized this increase. In general, applied research funding has not declined. In the short run, it appears that the impact on research funding for engineering will be minimal due to the emphasis on applied research. This could definitely change under a long-term downsizing environment. Funding levels for research may also be adversely impacted by the possible restrictions on affirmative action/set-aside research programs. While this could limit new programs in the College that are directed toward minority institutions, the College's research strengths will allow it to compete effectively with majority non-minority institutions.

State Funding Levels (E&G): The continued decline in State funding for education, and the inability to define a steady source of revenue to adequately support education, will severely affect the quality of our programs. The State of Florida is currently ranked near the bottom in Higher Education Expenditures per Student Enrolled in Public Institutions. The State legislature continues to use lottery proceeds to replace dollars taken from education, instead of enhancing existing funding. This continues to have a negative impact on the overall quality of our students' education. Equipment that was considered obsolete over a decade ago is still being used by the University for lack of state funding needed to replace them. Engineering students are being taught, in some cases, with equipment that is no longer used in real-life and which were state-of-the-art a generation ago. While the College has been somewhat successful in obtaining used equipment from the federal agencies, and as donations from larger corporations, the situation is still so critical as to be labeled a crisis. The College will continue to lobby the University Administration for substantial funding for OCO purchases. Meanwhile, efforts will continue to acquire donated equipment, from federal agencies and corporations, which may not be as obsolete as our current inventory.

Job Market: The job market affects the availability of full time students both at undergraduate and graduate levels. Locally, a strong job market appears to encourage students to defer their education or progress at a slower rate. Nationally, a strong job markets results in fewer students pursuing graduate studies in engineering. The curriculum and the program schedule have to be flexible to respond to the changing nature of students' needs in a fluctuating job market.

4. STRATEGIC DIRECTIONS AND AREAS OF EMPHASIS

Provide a vision of your unit in five years from now. Include strategic directions and special areas of emphasis in which you expect to be known for excellence.

- It is envisioned that in the next five years the College of Engineering and Applied Sciences will be considered as being among the **top twenty five percent** of public engineering colleges in the country. It is expected that the funded research from all sources will exceed **fifteen million dollars**. The College will increase and enhance its research centers, develop educational technology as a means of improving learning and expanding the learning audience to include pre-college students, practicing professionals and international learners and expand its research and graduate programs.

- By the year 2003, externally sponsored research funding will exceed $15 million dollars. With the current faculty allocation paradigm, a significant increase in faculty is not anticipated during this period. Since the level of sponsored research activity on a per faculty basis is well above comparable schools, the major strategy to achieve to support the University's research goal is to strengthen the existing research centers within the College of Engineering and, where possible, to establish additional research centers. In addition, the College will continue to create an academic environment that is conducive for high quality research by individual principal investigators. Research Supplement Program (RSP) and Faculty Research Awards will be instituted to support the University's strategy to increase sponsored research. However, it is recognized that this strategy may an incentive to some individuals to participate in sponsored research activities, it also reduces the funds that could be used to increase the number of researchers by increasing "soft-money" positions. In recognition of the complexity and interdisciplinary nature of today's problems, the College will continue to encourage joint research with other units within FIU and outside institutions worldwide.

- In addition to doing cutting edge research, the research centers will also facilitate the development of local high technology industry and provide focus into the strategic themes of the University - information and communication, urban, environmental, international, and health. The current research centers include CATE, HCET, DWRC, LCTR MRC -Manufacturing Research Center and FAST - Center for Cryoelectronics. Cardio-Vascular Research Center will start functioning as soon as its space is renovated in EAS. Each of these centers also supports a majority of faculty within individual departments though shared resources and open access to capital structure and equipment.

- The establishment or the enhancement of research centers will be strengthened by completion of the on-going move to the new Center for Engineering and Applied Science (formerly the Cordis facility). This will alleviate the space crisis that limited the development of the Centers in the past and should provide sufficient space for growth. During the next few years, an infrastructure must be established to support the centers, including financial and contractual oversight, personnel, support personnel, including both technical and administrative/financial. During the next five years, it is critical that the University reinvests in the centers, by enhanced return of indirect costs and investing in research support personnel. With this level of support, continued growth of research at 20% per year will be attainable.

- By the year 2003 the College will be offering doctoral degrees in Mechanical, Electrical, Civil, Industrial and Computer engineering. The research areas of emphasis will include:

  - Environmental
  - Materials
  - Education technology
  - Information and Communication
  - Bio-medical

- By the year 2003 the College of Engineering and Applied Sciences will have developed the Center for Engineering and Applied Science into a nationally recognized research and development center. It is envisioned that a university-industry partnership-building program will have been developed, robust industry research collaboration will be underway, and a business incubator will have been initiated.

5. LONG RANGE GOALS AND ANNUAL OPERATIONAL GOALS

Long Range Goal 1: Continue to Improve the Quality of Learning
It is the long-range goal of the College to develop an engineering program that has national and international recognition as a leader in engineering education.

Measurable Outcome: The set of tables presented at the end of this goal provides an extensive strategy for evaluation, and assessing the progress and quality of learning.

Goals and Outcomes for 1997-98:

1997-98 Goal: Improve student learning.

Outcome: Improvements through expanded capstone projects, innovative labs, faculty training in teaching/learning topics, and undergraduate students' involvement in faculty research.

1997-98 Goal: Continue to seek improvements and consistent high score levels in the EIT exam.

Outcome: A matrix of all course topics versus our engineering departments has been created to guide the chairpersons towards the areas that need attention.

1997-98 Goal: Continue to develop the Total Quality Learning program.

Outcome: In addition to the above items, faculty are asked to design and place new learning material on web; and a matrix of TQL has been developed for all departments to begin to address the Quality issues in detail.

1997-98 Goal: Increase the number of recruitment visits to local area high schools and community colleges so that representatives from each department conduct at least two visits each semester.

Outcome: This goal was accomplished.

1997-98 Goal: Continue to develop the College's Engineering Mentor Program - PRISM (Program of Industry Supported Mentorships).

Outcome: Due to a lack of interest by students, this program was terminated.

1997-98 Goal: Continue to seek greater diversity in the student body and staff.

Outcome: Received a grant ($ 30,000) to recruit women to engineering fields. Hired a Hispanic female in Computer Engineering.

1997-98 Goal: Plan faculty workshops to prepare for ABET 2000 reaccredidation.

Outcome: Workshops are being planned to begin in January 1999.

OBJECTIVES FOR 1998-99

Objective 1A: Design capstone projects: Capstone design projects that are interdisciplinary give our students a breadth and dept of knowledge and experience by exposing them to several different fields of engineering design, which also include, ethics, safety, social services and human factors.

Objective 1B: Develop New Teaching Labs: Several new teaching lab types have been developed for better learning, e.g. Human/Computer Interaction Lab, Multimedia Development Lab, Computer Controlled Data Acquisition Lab, Digital Signal Processing Lab; and new ways to direct and integrate such labs are continually explored.

Objective 1C: Teaching Workshops: Several workshops on learning faculty-teaching techniques are designed and taught by both FIU and external personnel every year.

Objective 1D: Technology Based Teaching: A very ambitious strategy has been developed which will increase not only student learning, but also time and space optimization. This strategy includes the key elements of first, faculty training of latest technology, then setting a goal of using this technology in an increasing percentage each year.

Objective 1E: Involvement of Undergraduate Students in Faculty Research: A strategy of increasing the number of students, especially undergraduates that are involved with faculty research projects is giving many students a learning experience that is unique and valuable. This increase is promoted by asking funding agencies to support more students and by a combination of study/research independent study.

Objective 1F: Continue to seek improvements and consistent high score levels in the FE exam.

Objective 1G: Continue to develop the Total Quality Learning program.

Objective 1H: Plan faculty workshops to prepare for ABET 2000 reaccredidation.

Objective 1I: Increase the number of recruitment visits to local area high schools and community colleges so that representatives from each department conduct at least two visits each semester.

Objective 1J: Continue to seek greater diversity in the student body and staff.

Matrix of Engineering Education Assessment Measures

Pre-Graduation Devices

Desired Attribute	Transcript	FE Exam	MFAT	GRE	GMAT, LSAT, MCAT	Self-analysis Survey	Portfolio	Video Presentation	Co-Curricular Resume	Other
Knowledge of Math, Sci & Engr.	1	1	2	2		2	2	3		
Experimentation and Data Analysis	2					3	2	2		
Design	2					2	2	1		
Multidisciplinary Teamwork						2	1	2	2	
Problem Solving	2	2	2	2		2	3	3		
Professionalism, Ethics						2	2		3	
Communication	2					2	1	1		
Broad Education	1					2			1	
Life-long Learning	2			3		2			3	
Contemporary Practice and Issues	2	2	2			1	2	2	1	

Post-Graduation Devices

Desired Attribute	Admission to Prof. Or Grad Schools	Job Offers Per Student	Average Starting Salary	Five-and 10-Year Career Survey	Post-Grad Satisfaction Survey	Other
Knowledge of Math, Sci & Engr.	3			3	1	
Experimentation and Data Analysis					2	
Design					2	
Multidisciplinary Teamwork				3	2	
Problem Solving				3	2	
Professionalism, Ethics					2	
Communication				3	2	
Broad Education	3			3	2	
Life-long Learning				1	1	
Contemporary Practice and Issues		2	2	3	1	

**Note: Numbers indicate levels of correlation between the measurement device and the desired attribute:
1= Reasonable, 2=Moderate, 3= Possible

Long Range Goal 2: Research

The long range goal of the College is to continue to be a major player in moving FIU towards its goal of achieving "Research I University" status.

Measurable Outcome: Measurable outcomes include the federal research funding, research funding from other sources, grant proposals submitted and funded, publication and dissemination of research outcomes in scholarly journals and conferences.

Goals and Outcomes for 1997-98 (Research and Graduate Programs):

1997-98 Goal: Continue to seek greater control over the sponsored research overhead return at the College level.
Outcome: Vice President for Research and Graduate Studies has been made aware of college's needs for greater control over the sponsored research overhead return.

1997-98 Goal: A Rapid Electronic Prototyping Center is planned with a complete surface mount and rapid prototyping capability.
Outcome: This Center was completed and an operational part of the Manufacturing Research Center.

1997-98 Goal: Support the development of the FIU Research Foundation.

Outcome: The FIU research Foundation is in place, but not operational.

Other achievements in 1997-98:

- Discussion has begun with Taurus Development, Inc. regarding a research building on the CEAS site.
- Negotiations are underway regarding the location of USGS on the FIU campus.
- Initial plans for a bio-medical incubator at CEAS is complete. Negotiations have begun regarding the first tenants.

OBJECTIVES FOR 1998-99

Objective 2A: Concentrate on funding opportunities that attract federal funding which are a measure of Research I status.

Objective 2B: Attract funding from other sources to enhance the College resources.

Objective 2C: Promote interdisciplinary research within in the College of Engineering and with other units in the university to enhance overall research productivity in the University.

Objective 2D: Develop a Research Supplement Program (RSP) that will support the above three objectives.

Objective 2E: Develop a database system to manage the research program in an efficient and effective manner.

Objective 2F: Continue to encourage the administration to decentralize the administrative control over the sponsored research. A significant improvement could be made by allowing the College to manage the expenditure of overhead return at the College level. If is believed that the College level administration is in a better position to effectively direct the expenditure of these funds to effect the research and educational goals of the college.

Objective 2H: Continue to support the development of the FIU Research Foundation so that it becomes operational.

Objective 2I: Continue with the research initiatives, which were started in 1997-98.

- Discussion has begun with Taurus Development, Inc. regarding a research building on the CEAS site.
- Negotiations are underway regarding the location of USGS on the FIU campus.
- Initial plans for a bio-medical incubator at CEAS is complete. Negotiations have begun regarding the first tenants.

Long Range Goal 3: Graduate Programs

The long-range goal of the College is to offer graduate programs both at master and Ph.D. levels in which the quality of its students is consistent with the quality of graduates of a Research I University.

Measurable Outcome: The measurable outcomes include the quality of incoming students as measured by G.P.A. and GRE scores; retention of students; research conducted as graduate students; teaching experience as graduate students; admission to doctoral programs and job offers to the graduates.

OBJECTIVES FOR 1998-99

1998-99 Objective 3A: Maintain the current level external research dollars awarded in order to continue to graduate programs.

1998-99 Objective 3B: Enhance the FEEDS program and increase the use of web-based delivery of engineering education.

1998-99 Objective 3C: To explore the viability of a graduate program that is broader in scope and closely matched to both industry and future academic requirements.

1998-99 Objective 4C: Initiate the Master's degree in Biomedical Engineering.

Long Range Goal 4: Educational Technology and Academic Infrastructure

The goal of the College is to become a leader in the use of educational technology to support both the classrooms teaching and asynchronous learning through distance education.

Measurable Outcome: Measurable outcomes include the use of technology in improving the quality of classrooms and teaching labs, technology based curriculum and educational delivery system and the number of courses offered through distance learning.

Goals and Outcomes for 1997-98 (Educational Technology):

1997-98 Goal: Establish the Digital Media Development Laboratory. The Digital Media Development Laboratory will focus on the development of course content creation for implementation in our Distributed Learning delivery system. This unit will provide the required hardware, software and technical assistance to all the faculty involved in content creation targeted for distributed learning, establishing the required support for the next implementation phase of our distributed learning system.

Outcome: This goal has been achieved. The Digital Media Development Lab is operational and it is ready to start providing technical assistance to faculty members involved in curriculum development for our Distributed Learning delivery system.

Goals and Outcomes for 1997-98 (Academic Infrastructure)

1997-98 Goal: Move the undergraduate upper division program to CEAS.

Outcome: The move is progressing. Most of the engineering classes were moved to the CEAS building at the beginning of the Fall 1998 term. It is anticipated that undergraduate laboratories and related facilities should be completed by the end of the Summer 1999 term.

1997-98 Goal: Implement a doctoral degree program in Civil Engineering.
Outcome: The program has been implemented.

1997-98 Goal: Implement a Bachelor's degree program in Chemical Engineering.
Outcome: The program has been implemented. However, no funding or positions have been made available to support the program.

1997-98 Goal: Implement the "Doctor of Engineering" degree.
Outcome: The program has been included in the Board of Regent's next five-year plan.

1997-98 Goal: Implement a Bachelors degree program in Environmental Engineering.
Outcome: This degree, or possibly a track, will be considered during the next five years.

1997-98 Goal: Continue to work with the Office of the Provost to identify a sufficient and continuing source of funding for the equipping and maintaining existing and new teaching laboratories, as well as the development of a state-of-the-art Machine Shop.
Outcome: This goal continues. No progress has been made at this point.

OBJECTIVES FOR 1998-99

1998-99 Objective 4A: Continue to develop the facilities, the support staff, and train the faculty to deliver the an increasing portion of the engineering curriculum in a distributed or asynchronous learning mode.

1998-99 Objective 4B: To complete our EAS distributed/asynchronous facilities and continue faculty workshops in learning/teaching technology.

1998-99 Objective 4C: Equip FEEDS lab with the state of the art technology and enhance FEEDS programs.

1998-99 Objective 4D: University Computer Services should relocate and maintain the undergraduate computer lab on the EAS campus.

1998-99 Objective 4E: Equip the classrooms at the EAS campus with the state of the art educational technology facilities.

1998-99 Objective 4F: Move the undergraduate upper division program to CEAS.

1998-99 Objective 4G: Study the feasibility of Implementing the "Doctor of Engineering" degree.

1998-99 Objective 4H: Continue to work with the Office of the Provost to identify a sufficient and continuing source of funding for the equipping and maintaining existing and new teaching laboratories, as well as the development of a state-of-the-art Machine Shop.

Long Range Goal 5: College Advancement
To achieve excellence in its academic programs, it is clear that the College must significantly increase external funds from non-research sources.

Measurable Outcome: Measurable outcomes include the donations and gifts received from private sources.

1997-98 Goal: The College of Engineering and Design will use the College Advisory Council as an active partner in strategic planning and fund raising.
Outcome: The fundraising committee was established under the leadership of Dr. Norman R. Weldon.

1997-98 Goal: Complete the Strategic Plan for Development.
Outcome: Development plan is undergoing modifications for Phase II of campaign in accordance with Research I goals.

1997-98 Goal: Establish a scholarship endowment for the College.
Outcome: Scholarship Endowment was established with $ 100,000 gift from SGI. Biomedical Engineering Graduate Fellowships were established with a gift of $ 100,000 from Norman R. Weldon.

1997-98 Goal: Establish two Eminent Scholars Chairperson positions (Biomedical and Rapid Prototype Manufacturing are two areas to consider)
Outcome: One eminent scholar's chair in biomedical engineering is in final stage of negotiation.

1997-98 Goal: Increase external exposure for specific programs.
Outcome: College brochure was produced and distributed.

1997-98 Goal: Develop publication packages.
Outcome: College brochure was produced and distributed.

OBJECTIVES FOR 1998-99

1998-99 Objective 5A: Increase the level of donations toward the goal of reaching a sustained level of $2 million in donations and gifts per year by the end of the next decade.

1998-99 Objective 5B: Continue to work to establish endowed Chairs. Establish at least five endowed professorships in the next five years.

1998-99 Objective 5C: Increase College administrators' interaction with the local and national industry community. Have the academic departments establish, and work closely with their Industrial Advisory Board (IAB).

1998-99 Objective 5D: Work with fundraising committee to advance the fundraising efforts of the College.

1998-99 Objective 5E: Develop a strategic plan to address Research I goal.

1998-99 Objective 5F: Increase scholarship endowment to $ 500,000.

1998-99 Objective 5G: Develop PR campaign for the College.

Long Range Goal 6: ***Professional Development***
It is the intention of the College to influence society through leadership in the field of engineering.

Measurable Outcome: The measurable outcomes include the number of training programs conducted, partnerships with business and industry and industry sponsored projects.

GOALS FOR 1998-99

1998-99 Objective 6A: Increase activities leading to in technology transfer, executive training, industrial partnering and interaction with the primary and educational systems.

1998-99 Objective 6B: Explore the possibility of establishing the business incubation center.

Long Range Goal 7: Enhance Economic Competitiveness of the Region

The College of Engineering will enhance the economic competitiveness of the region by providing qualified and well trained engineering graduates; training the workforce at all levels of employment; creating new knowledge through research; spur industrial development through the use of faculty as consultants, applied research and industry sponsored research.

Measurable Outcome: Number of graduate at undergraduate master and Ph.D. levels; grants received from all sources; applied and industry sponsored research projects completed; training programs conducted; and university-industry partnerships established.

OBJECTIVES FOR 1998-99

Objective 7A: Curriculum modifications to meet industry needs.

Objective 7B: Offer Executive Development Programs and training for all level of employees.

Objective 7C: Create university-industry partnerships.

Objective 7D: Take steps to develop business incubator within the College.

Objective 7E: Offer more and more programs through distance education.

Long Range Goal 8: International

Gain global recognition as a leading engineering education institution.

Measurable Outcome: The measurable outcomes include: number of international students, number of faculty/student exchange programs, collaborative research projects with institutions in other countries, research that has world-wide implication, publication in international journals and participation in international conferences.

Goals and Outcomes for 1997-98 (Outreach)

1997-98 Goal: The Associate Dean for Diversity and International Programs will develop programs for international outreach and diversity, in addition to managing existing local outreach programs.

Outcomes:

Nicaragua: The College of Engineering and Sandia National Laboratory, along with the collaboration of representatives from the government of the Republic of Nicaragua have participated in three Vital Issue Panels in order to develop an Information System for the Management of Water Resources in the Republic.

Representatives from the Hemispheric Center for Environmental Technology (HCET), the Water Research Center (WRC), and the Southeastern Technology Applications Center (STAC) participated in the discussion and content that lead to the development of a final proposal. This proposal will be presented to

the World Bank, and if funded, will assure the development of an Information System for the Management of Water Resources in the Republic of Nicaragua. The entire VIP process, from preliminary planning to the development of a final proposal, spanned over 7 months.

Mexico: The College of Engineering participates each year in the Semester Abroad Program in conjunction with the Florida-Mexico Institute of the Latin American and Caribbean Center (LACC). The College serves engineering students from Monterrey Institute of Technology from Mexico. Students are provided with an out of state waiver while they take engineering classes at FIU.

As part of a Faculty Exchange and Collaboration, FIU is pursuing efforts to have Dr. Elena Anguelova Gortcheva, Associate Professor of the Centro de Investigacion y de Estudios Avanzados del IPN to obtain a post-doctoral degree in Electrical and Computer Engineering. Dr. Kang Yen, Associate Professor of Electrical and Computer Engineering is maintaining the lead on this effort.

Panama: A memo of understanding by and between HCET and the University of Panama has been signed in order to put together a proposal to both the Panamanian government and the US Air Force. This proposal will consist of analyzing the pollution found on the location of former US military bases. Additionally, the proposal will study methods of restoration and remediation if pollution is founds at these areas. This effort is part of the Panama Canal Treaty which will take full effect on January 1, 1999.

Puerto Rico: The College of Engineering at FIU is working in conjunction with the Universidad del Turabo in Caguas, Puerto Rico on the NASA-funded, Project VISION (Very Intensive Scientific Intercurricular On-Site Education). This program is designed to provide enhanced training to middle school teachers on the use of computer software and on accessing the Internet. These middle school teachers will also receive training on presenting to their students learning modules that contain hands-on and minds-on activities.

Colombia: Preliminary conversations have taken place among the Lehman Center for Transportation Research, the Hemispheric Center for Environmental Technology, Sandia National Laboratory and the Minister of Transportation in Colombia, Mr. Rodrigo Marin Bernal. A Vital Issue Panel process is being proposed to take place in Columbia that will study the problems and issues related to transportation in that country.

Asia: Dr. Kokiat Kengskoll is leading the College of Engineering's drive towards greater involvement with the Asian nations. Ventures including Training Programs, Faculty Exchanges, Graduate and Undergraduate Student Exchanges, and Commercial Trade will be pursued. Dr. Kengskool will be working with other faculty in the University to see that these activities reach fruition.

France: Administrators and Faculty from the Ecole Superieure Des Sciences et Technologies de L'Ingenieur de Nancy visited Florida International University. They were impressed with the College's facilities and were enthusiastics to purue a closer collaboration with the College. To that effect, they have offered **two, one-year sabbaticals to our research faculty for this coming year.**

Haiti: During the 1998/99 academic year, a Vital Issues Panel theme will be selected in Haiti in collaboration with Sandia National Laboratory and Dr. Sylvan Jolibois, Assistant Professor of Civil and Environmental Engineering. The theme for this VIP process is still under consideration.

International Recruitment: In the area of International Recruitment, the College is initiating relations with universities in Venezuela and Jamaica in order to begin offering the College's programs in those countries. The effort will center on both distance learning courses as well as study abroad initiatives. These two countries represent the largest number of International Students currently attending FIU, and therefore, FIU's name recognition may be at its highest in these countries.

GOALS FOR 1998-99

Objective 8A: Increase worldwide publicity of engineering programs

Objective 8B: Establish faculty/student exchange programs with the help of the Office of International Programs.

Objective 8C: Encourage faculty to get involved in collaborative research projects; publish in journals that have word-wide dissemination; and participate in international conferences.

Objective 8D: Explore the possibility of establishing an **International Center for the Advancement of Engineering Education**. This center will provide short-term training and learning experience to "engineering faculty" from other countries. It is expected that this effort will enhance international contacts; bring more visibility to FIU; provide opportunities for joint research; attract quality graduate and undergraduate students.

PART II: SPECIAL TOPICS AND GOALS

1. EXTERNAL FUNDING

a. Private Sector Fund Raising.

PRIVATE SECTOR FUND RAISING RESTRICTED GIFTS RECEIVED BY CALENDAR YEAR							
	Actual 1995	**Actual 1996**	**Goal 1997**	**Outcome 1997**	**Goal 1998**	**Goal 1999**	**Goal 2000**
Engineering	473271	381260	400000	612727	500000	70000	80000
Total							
Grand Total							
Actuals reflect new gifts, cash, pledge payments and in-kind gifts received during the calendar year- Jan 1 to Dec. 31.							

b. Contracts and Grants

LONG-TERM CONTRACTS AND GRANTS GOALS ($)								
YEAR	96-97	96-97	97/98	97/98	98/99	99/00	00/01	01/02
	Goal	Actual	Goal	Actual	Goal	Goal	Goal	Goal
Academic Affairs								
Engineering	3,500,000	1,459,921	6,735,000	11,815,144	12,000,000	13,000,000	14,000,000	14,500,000
Total								

**Not applicable

c. Research, scholarship, and creative activities.

Research, Scholarship and Creative Activity										
	1994/95	**1995/96**	**1996/9**	**1997/9**	**1997/98**	**1998/9**	**1999/00**	**2000/0**	**2001/0**	
	Actual	**Actual**	**Actual**	**Goal**	**Actual**	**Goal**	**Goal**	**Goal**	**Goal**	
ENGINEERING										
1. Patents	0	0	0	0	0	0	0			
2. Refereed and published journals	150	135	127	163	127	150	155	160	165	
3. Books published	10	8	12	7	12	9	11	12	13	
4. Chapters published in	9	13	18	18	5	20	21	23	25	
5. Refereed articles	170	207	190	153	35	170	180	190	200	
6. Newspaper	76	96	50	57		60	65	70	75	

2. ENROLLMENT PLANNING.

a. Annual FTE's by Level, Campus and Semester

ANNUAL FTE TARGETS BY LEVEL BY CAMPUS										
	1998-99					1999-2000				
LEVEL	**TOTAL**	**UP**	**NM**	**BR**	**OTHER**	**TOTAL**	**UP**	**NM**	**BR**	**OTHER**
LOWER	87	67	0	1	19	94	72	0	1.39	20.61
UPPER	554	533	.45	18	2.55	568	547	.46	18.49	2.05
GRADUATE	186	148	0	17	21	195	155	0	18.38	21.62
THESIS/DIS	18	18	0	0	0	20	20	0	0	0
TOTAL	845	766	.45	36	42.55	877	794	.46	38.26	44.28

UP = University Park; NM = North Miami; BR = Broward; OTHER = Off-campus & other sites.

ANNUAL FTE TARGETS BY LEVEL BY SEMESTER

LEVEL	TOTAL	Summer 1998	Fall 1998	Spring 1999	Total	Summer 1999	Fall 1999	Spring 2000	
LOWER	87	8.11	41.83	37.06	94	8.76	45.19	40.05	
UPPER	554	122.02	222.06	209.92	568	125.1	227.67	215.22	
GRADUATE	186	44.08	73.77	68.15	195	46.21	77.34	71.45	
THESIS/DISS	18	4.33	6.68	6.99	20	4.81	7.42	7.77	
TOTAL	845	178.54	344.34	322.13	877	184.88	357.63	334.49	

b. Degrees Awarded.

DEGREES AWARDED								
College/School	Actual 94-95	Actual 95-96	Actual 96-97	Goal 97-98	Goal 98-99	Goal 99-00	Goal 00-01	Goal 00-02
Engineering	Includes Civil, Elect, Industrial, Mech, Computer, Env., and Construction only*							
Bachelors	238	259	240	250	260	270	280	290
Masters	75	64	89	97	100	105	110	115
Doctoral	3	3	1	3	4	5	6	7

*** Does not include any phased out technology programs and Architecture programs.**

3. ACADEMIC PROGRAMS

a. Proposed changes (additions or deletions) of new degrees, certificates, tracks, etc.:
(See Section VI of 1997-99 Academic Affairs Outcomes and New Goals)

The following programs are on BOR 1998-2003 Master Plan

BACHELOR

- Software Engineering
- Environmental Engineering
- Construction Engineering

MASTERS

- Materials Science Engineering
- Chemical Engineering
- Biomedical Engineering
- Industrial & Systems Engineering

DOCTORAL

- Industrial & Systems Engineering
- Engineering (D.E.)

b. Major curriculum changes:

None

4. UNDERGRADUATE EDUCATION

a. What are your goals for strengthening the student advising system in your unit?

- Move the student advising office in the EAS building.
- University should develop an on line system for advising and registration
- The registration system should check for prerequisites and not allow students to register out of sequence
- Prepare an annual schedule of course offerings to help students to plan for the entire year

b. Please describe any specific efforts, programs or goals you have for retention of students in your unit.

- Involve representatives from student organization and clubs as peer counselors.
- Organize seminars on issues that are of current and future importance to engineering graduates.
- Contact those students who have dropped out of the program and encourage them to reenroll.
- Conduct a survey of students to find ways to make their academic experience more rewarding at the College of Engineering.
- Provide undergraduate students with research based learning by involving them in faculty research projects.

c. What majors have or are developing honors tracks? Include date initiated or planned.

- Electrical Engineering (Fall, 1993)

d. What are the number and percent of undergraduate credit hours taught by adjuncts?

- 8138 student credit hours; 26.37%

e. What are the number and percent of undergraduate credit hours taught by graduate teaching assistants?

UNDERGRADUATE CREDIT HOURS TAUGHT BY GRADUATE TEACHING ASSISTANTS												
	Actual 95/96		Actual 96/97		Goal 97/98		Actual 97/98		Goal 98/99		Goal 99/2000	
	#	%			#	%	#	%	#	%	#	%
Engineering	1750	5.5	0	0	2025	6.0	1289	4.2	1400	4.5	1500	4.5
TOTAL												

f: **List the clubs or honor societies your departments sponsor.**

College of Engineering and Design
Association of Cuban Engineers
Chinese Student Association
Engineering Honor Society
Florida Engineering Society
Gateway Student Club
Mexican-American Engineers and Scientists
National Society of Black Engineers
Order of the Engineer
Society of Women Engineers
Tau Beta Pi

Civil & Environmental Engineering
American Society of Civil Engineers
Civil Engineering Honor Society
Institute of Transportation Engineers
Environmental Student Club
Chi Epsilon
Water Environment Federation

Construction Management
Associated General Contractors of America
National Association of Women in Construction
Sigma Lambda Chi Construction Honorary Society
Associated Builders and Contractors

Electrical & Computer Engineering
Institute of Electronic and Electrical Engineers
Eta Kappa Nu

Industrial & Systems Engineering
Institute of Industrial Engineers Student Chapter
Alpha Pi Mu
Society of Manufacturing Engineers Student Chapter

Mechanical Engineering
American Society of Mechanical Engineers
American Institute of Plant Engineers
Pi Tau Sigma
American Institute of Plant Engineers
Society of Manufacturing Engineers
Society of Automotive Engineers
American Society of Heating, Refrigeration and Air Conditioning Engineers
International Society of Hybrid Microelectronics
Fisher International Society of Hybrid Micro Electronics
Mini-Baja Club - all terrain vehicle design group
Submariner - Human powered submarine design group
Solar Car Club - solar car design group
Mechanical Engineering Coalition of Clubs - MECC

5. GRADUATE EDUCATION

a. Number of graduate students, number and percent of .25 FTE assistantships:

NUMBER OF GRADUATE STUDENTS, NUMBER AND PERCENT OF .25 FTE ASSISTANTSHIPS															
	Fall 96 Outcome			Fall 97 Goal			Fall 97 Outcome			Fall 98 Goal			Fall 99 Goal		
	Tot	GA	%	Tot	GA	%	Tot	GA	%	Tot	GA	%	Tot	GA	%
Engineering	382	96	25.1	410	105	25.6	425	108	25.4	425	110	25.9	450	125	27.7
TOTAL															

b. Total amount of graduate student support (OPS):

TOTAL AMOUNT OF GRADUATE STUDENT SUPPORT (OPS)					
	Outcome 96	Goal 97	Fall 97 Outcome	Goal 98	Goal 99
Engineering	83182	91500	100650	106000	111000
Total					

c. Average Total GRE Score of Graduate Students:

AVERAGE TOTAL GRE SCORE OF NEW GRADUATE STUDENTS						
	95 Outcome	96 Outcome	97 Goal	97 Outcome	98 Goal	99 Goal
Engineering	1050	1028	1050	1036	1055	1060
TOTAL GRE						

d. Number and percent of black graduate students:

NUMBER AND PERCENT OF BLACK GRADUATE STUDENTS												
	Fall 1995 Outcome		Fall 96 Outcome		Fall 1997 Goal		Fall 1997 Outcome		Fall 1998 Goal		Fall 1999 Goal	
	#	%	#	%	#	%	#	%	#	%	#	%
Engineering	29	8	29	7.6	32	7.8	35	8.2	38	8..3	42	8.4

6. INSTITUTIONAL EFFECTIVENESS AND POLICIES

a. Do you anticipate changes in your unit policies and procedures. Indicate in which policy manual they are recorded, e.g. Academic Affairs Policy and Procedures Manual, Undergraduate Policy Manual, Unit Policy Manual, etc.

- The College of Engineering does not anticipate any major policy change.
- However, we plan to develop the Research Supplement Program (RSP) proposal for the College of Engineering to be recorded in the appropriate manual.

b. Note special planning initiatives undertaken this past year and those planned in the future. (e.g. strategic plan, marketing plan, distance learning, etc.) If completed, specify title and date of planning reports.

- The College of Engineering plans to continue marketing Engineering Education in general and FIU's College of Engineering in particular to South Florida's high school students through faculty visits and other means.
- We are in the process of establishing a database of engineering colleges around the world to bring more visibility to the College of Engineering. We will send information about our research and teaching programs to the colleges in the database.
- FEEDS labs in the EAS building, when equipped with appropriate technology, will help in boosting the distance learning programs.
- We are in the process of developing programs for executive education in technical and engineering fields.
- We are exploring the possibility of organizing a worldwide conference on environmental issues.
- We are exploring the possibility of establishing an International Center for the Advancement of Engineering Education at FIU.

c. Internal Audits: When was the last audit? What were the outcomes? When is the next audit?

- Faculty Activity Reports (I&R data forms for 12-hour law) are audited.

(d, e & f below apply to every unit and must be responded to. This is required for SACS Accreditation. Your response will be provided to the Susan Himburg, FIU Self-Study Director, for compliance with Criteria for Accreditation, Section III: Institutional Effectiveness)

d. Discuss the ways you assessed the quality of your programs in 1997-98. Please attach a printed copy of your Quality Assurance Plan that specifies the guidelines, procedures and assessment instruments used to evaluate the effectiveness of your programs. Attach program evaluation reports, especially if they contain recommendations for program improvement that demonstrate your use of the results.

- Attached

e. Discuss the ways in which these assessments were used to improve the quality of your programs. (Specifically discuss 2 improvements resulting from program assessments. Be sure to make clear how these are related to program evaluation results and unit goals).

- Developing a strong link with Chemistry department to support our new Chemical Engineering degree.
- All departments have been asked to establish an industrial advisory committee.
- Faculty salaries, in some cases, are lower due to salary compression; solutions are explored.
- More open communication between faculty is encouraged.
- Improving computer access to students.
- New Course gas been developed to solve weakness in the Computer Engineering program.

f. Detail the faculty/staff involvement in the planning/evaluation process. Who participated in or this planning and accountability report?

- The Dean, associate and assistant deans, chairpersons, and faculty participated in preparing this report. Each chairperson submitted reports for their department. These reports were aggregated at the College level and used as the basis of this report.

g. Criteria for SACS Accreditation: In preparation for the site visit in the year 2000 by the Southern Association of Colleges and Schools, units need to address the Criteria for Accreditation. Read through all of the must statements in Selected Criteria for Accreditation provided to your unit by the Office of Accreditation. For must statements that you find a weakness, please provide a written response that includes: 1) the criterion and number; 2) the findings or identified weaknesses; 3) recommendations for how the weakness will be addressed in 1998-99 and thereafter; 4) how the outcome of the modification will be assessed, 5) reference to related documentation such as program reviews, assessments, polices etc. If a criterion was specifically addressed in the goal section of this report then note the criteria number and goal number. Be prepared to discuss with SACS Criteria Committees precisely how your department or program meets that criterion.

They should be presented exactly in the order found in the SACS Criteria for Accreditation: Listed by Number. For complete list of criteria go to WWW.FIU.EDU/SACS. Follow the format detailed below:

Criteria Number Exact quote of must statement in italics.
Findings: Results of review for compliance with criteria.
Recommendations: Actions that should be taken to remedy weakness and who should be responsible for it.
Outcomes and Use of Results: What measurable outcomes are expected and how can these be used to improve the program/unit.
Documentation: List each source document and where it can be found.
Include web site address, if available in that medium.

- After reading all "must" statements in the "selected criteria for accreditation" we found no weakness in our college.

7. FACULTY DEVELOPMENT AND RECRUITMENT

a. Percent and Total number of Black, Hispanic, Asian, other minorities and female faculty:

NUMBER AND PERCENT OF FEMALE AND MINORITY FACULTY

	1995/96 Actual			1996/97 Actual			1997/98 Actual			1998/99 Goal*			1999/00 Goal		
	Tot	#	%	Tot	#	%	Tot	#	%	Tot	#	%	Tot	#	%
Engineering	11	8		11	8		9	8		11	9		12	10	
TOTAL															

Source: Authorized Position File for Fall term of each year. Includes all full time faculty in the colleges and schools, including faculty on contracts and grants positions.

b. Number and Percent of Black, Hispanic, Asian, other minorities and women:

Total: 73

Black – 3;	Asian – 15;	Hispanic - 14;	Women – 12
4.1%	20.55%	19.18%	16.44%

8. ACADEMIC BUDGETING AND PERSONNEL

Guidelines:
The Panther Budget Allocation Model will be the primary method to allocate cost-to-continue funds to the academic units. Identified below are the actual allocations made for the past three years. Please complete the attached Special Project request form only if there is a special project request for budget and/or personnel for your unit. A special project request is defined as a necessity in your unit for resources that are needed in addition to the Panther Model budget distribution. Requests should only be made if you could not complete the task/project without additional funding. A written justification for the funds as well as a specification of the type of funding (position/OPS/EXP/OCO) and duration of funding (1 year or recurring for a limited amount of time) must accompany the request.

PLEASE NOTE THAT GOALS ARE NOT NECESSARY FOR THIS SECTION.

The Budget and Personnel data for each academic unit is listed below.

I. The initial implementation year for the Panther Budget Allocation Model was 1997-98.
II. In 1997, the School of Architecture separated from the College of Engineering and became an academic unit.

Please note for the Personnel data:
I. Faculty Manyear include filled and unfilled positions; however, it does not include those positions in the recurring account (xx-xx-xx9-xx), Lapse account (xx-xx-x8x-xx), Summer Reserve Account (xx-xx-x77-xx) or Summer B totals.
II. Support Manyears do not include those positions in the Recurring account or Lapse accounts.
III. The initial implementation year for the Panther Budget Allocation Model was 1997-98.

Budget figures are determined as:
I. Total salary excludes salaried positions earmarked for Lapse and recurring budgets. Total should include Broward and current/projected CUP and Summer.
II. OPS/EXP/OCO is the total of unit base allocation plus recurring and supplemental (if any).

	95/96 Actual	**96/97** Actual	**97/98** Actual	**98/99** Request	**99/00** Request
ENGINEERING					
E&G:					
Faculty Manyears(1)	69.89	78.61	65.48	67.44	69.46
Support Manyears(2)	28.00	41.50	39.99	41.19	42.43
Lapse Manyears	8.87	10.83	8.15	8.40	8.65
Recurring Manyears	13.50	13.75	12.25	12.62	12.99
Student-Faculty Ratio(3)					
Faculty-Support Ratio(4)					
Total Salary(5)	7,883,074		7,989,559	8,229,246	8,476,123
Sal. Lapse Rq=t ($)	262,045		536,335	452,609	466,187
OPS/EXP/OCO(6)	1,359,015	1,733,816	1,511,803	1,557,157	1,603,872
Contracts & Grants:					

(1) 1995-96 Actual compiled from 2/27/96 CUR file; 1997-98 AActual≅ compiled from 1/30/98 CUR file. Information consists of 9 and 12 month permanent and visiting appointments, E&G, CUP and Broward. It does not include positions in the Recurring and Lapse accounts.

FLORIDA INTERNATIONAL UNIVERSITY
"SPECIAL PROJECT" BUDGET REQUEST
Submit by May 22, 1998

Please use a separate form for each item/issue Date: May 22, 1998

UNIT NAME: College of Engineering

PERSON REQUESTING: Gordon R. Hopkins

PURPOSE OF REQUEST*: **PROJECT**: ***Florida International University Search for Engineering Talent***

The College of Engineering plans to implement the project – *Florida International University Search for Engineering Talent* – on an experimental basis this year in order to improve student recruitment and bring more visibility to FIU in general and the College of Engineering in particular. The project will involve the students from South Florida's public and private schools and community college to take part in an essay competition. Appropriate prizes will be awarded to the winners. Attachment describes the details of this contest. This is Long range Goal 9A.

*Link to specific unit goals in the 1998-99 Planning and Accountability Report (Identify appropriate goal number and page number).

PLEASE IDENTIFY THE TYPE AND QUANTITY OF FUNDS BEING REQUESTED:
**Please specify below the length for which funding is requested: **

_____Recurring _____One year (1998-99) only

TYPE OF FUNDS:	FTE	TITLE	RATE
POSITIONS:			
9-month Faculty	None		
12-month Faculty			
A&P			
USPS			

Narrative Justification for Position Request:

OPERATING BUDGET:	$ AMOUNT
OPS	
OCO	
OTHER	

Narrative Justification for operating budget. Please include an itemized budget with a description of how current resources will not suffice.:

This is a new initiative that will help in student recruitment and improving FIU's visibility.
Budget:

Student Awards:	$ 20,000
Printing of the flyers:	$5,000
Postage/Mailing :	$5,000
Evaluation of the Essays:	$6,000
Award Ceremony:	$5,000
Secretarial/Adm:	$6,000
Miscellaneous:	$3,000
Total:	$ 50,000

List potential alternative funding sources, non-E&G (i.e. C&G, Foundation):
Attach additional pages as necessary to support this request.

FLORIDA INTERNATIONAL UNIVERSITY
"SPECIAL PROJECT" BUDGET REQUEST
Submit by May 22, 1998

Please use a separate form for each item/issue Date: May 22, 1998

UNIT NAME: College of Engineering

PERSON REQUESTING: Gordon R. Hopkins

PURPOSE OF REQUEST*: **Chemical Engineering**

*Link to specific unit goals in the 1998-99 Planning and Accountability Report (Identify appropriate goal number and page number).

PLEASE IDENTIFY THE TYPE AND QUANTITY OF FUNDS BEING REQUESTED:
**Please specify below the length for which funding is requested: **

_____Recurring ___X_____One year (1998-99) only

TYPE OF FUNDS:	FTE	TITLE	RATE
POSITIONS:			
9-month Faculty	.75	Professor	76,008
12-month Faculty			
A&P	1.00	Program Director	112,200
USPS			

Narrative Justification for Position Request:

The Bachelors Program in Chemical Engineering was approved for the 1997 Fall semester. However, due to the College's transition from the ECS building to the EAS building, implementation of this program was postponed until the 1998 Spring semester. The College requests CUP funding for the position of Program Director and for one faculty position, to meet the program's needs.

OPERATING BUDGET:	$ AMOUNT
OPS	
OCO	150,000
OTHER (Expense)	30,000
Salary	213,011

Narrative Justification for operating budget. Please include an itemized budget with a description of how current resources will not suffice.:

OCO and Expense funding is requested to fund purchases of equipment and supplies, respectively. In addition, salary is requested for the hiring of positions.

List potential alternative funding sources, non-E&G (i.e. C&G, Foundation):

Attach additional pages as necessary to support this request.

FLORIDA INTERNATIONAL UNIVERSITY
"SPECIAL PROJECT" BUDGET REQUEST
Submit by May 22, 1998

Please use a separate form for each item/issue Date: May 22, 1998

UNIT NAME: College of Engineering

PERSON REQUESTING: Gordon R. Hopkins

PURPOSE OF REQUEST*: **Computer Engineering**

*Link to specific unit goals in the 1998-99 Planning and Accountability Report (Identify appropriate goal number and page number).

PLEASE IDENTIFY THE TYPE AND QUANTITY OF FUNDS BEING REQUESTED:
**Please specify below the length for which funding is requested: **

_____Recurring ____X_____One year (1998-99) only

TYPE OF FUNDS:	FTE	TITLE	RATE
POSITIONS:			
9-month Faculty	.75	Professor	76,008
12-month Faculty			
A&P	1.00	Program Director	112,200
USPS			

Narrative Justification for Position Request:

The latest EAC/ABET program review requires two additional positions in Computer Engineering; a Program Director of Computer Engineering and a faculty position in computer/telecommunications engineering.

OPERATING BUDGET:	$ AMOUNT
OPS	
OCO	
OTHER (Expense)	

Narrative Justification for operating budget. Please include an itemized budget with a description of how current resources will not suffice.:

List potential alternative funding sources, non-E&G (i.e. C&G, Foundation):

Attach additional pages as necessary to support this request.

FLORIDA INTERNATIONAL UNIVERSITY
"SPECIAL PROJECT" BUDGET REQUEST
Submit by May 22, 1998

Please use a separate form for each item/issue Date: May 22, 1998

UNIT NAME: College of Engineering

PERSON REQUESTING: Gordon R. Hopkins

PURPOSE OF REQUEST*: **Electrical & Computer Engineering**

*Link to specific unit goals in the 1998-99 Planning and Accountability Report (Identify appropriate goal number and page number).

PLEASE IDENTIFY THE TYPE AND QUANTITY OF FUNDS BEING REQUESTED:
**Please specify below the length for which funding is requested: **

_____Recurring ____X_____One year (1998-99) only

TYPE OF FUNDS:	FTE	TITLE	RATE
POSITIONS:			
9-month Faculty			
12-month Faculty	1.0	Chairperson –ECE	$158,400
A&P			
USPS			

Narrative Justification for Position Request:

Since there has been an acting Chairperson in place for 1997-98, a position is requested for the hiring of a new Chairperson for the Department of Electrical & Computer Engineering.

OPERATING BUDGET:	$ AMOUNT
OPS	72,770
OCO	28,840
OTHER (Expense)	62,161

Narrative Justification for operating budget. Please include an itemized budget with a description of how current resources will not suffice.:

The College is requesting funds for the hiring of a new Chairperson for the Department of Electrical & Computer Engineering.

List potential alternative funding sources, non-E&G (i.e. C&G, Foundation):

Attach additional pages as necessary to support this request.

FLORIDA INTERNATIONAL UNIVERSITY
"SPECIAL PROJECT" BUDGET REQUEST
Submit by May 22, 1998

Please use a separate form for each item/issue Date: May 22, 1998

UNIT NAME: College of Engineering

PERSON REQUESTING: Gordon R. Hopkins

PURPOSE OF REQUEST*: **HCET**

*Link to specific unit goals in the 1998-99 Planning and Accountability Report (Identify appropriate goal number and page number).

PLEASE IDENTIFY THE TYPE AND QUANTITY OF FUNDS BEING REQUESTED:
**Please specify below the length for which funding is requested: **

_____Recurring ____X_____One year (1998-99) only

TYPE OF FUNDS:	FTE	TITLE	RATE
POSITIONS:			
9-month Faculty	.75	Asso. Dir.	90,000
	.75	Quality Assurance (QA)	80,000
12-month Faculty			
A&P			
USPS	1.00	Asst. Editor	40,020
	1.00	Program Assistant	35,505
	1.00	Sr. Word Processor	29,350
	1.00	Sr. Secretary	29,350
	1.00	Secretary	23,772

Narrative Justification for Position Request:

HCET's strategy, as outlined in the original proposal submitted by President Maidique to the US Department of Energy in April of 1995, is to migrate from a federally-funded to an independently funded research center. A gradual transition from federal funds to private sector and state funds is being realized. The positions requested for HCET in the 1998-99 Budget Request are those that were scheduled for state funding during the third (3rd) year of the program. Compliance with the agreement between FIU and the US Department of Energy requires the immediate institutionalization of these positions by FIU at the start of the 1998/99 academic year.

OPERATING BUDGET:	$ AMOUNT
OPS	
OCO	
OTHER (Expense)	

Narrative Justification for operating budget. Please include an itemized budget with a description of how current resources will not suffice.:

List potential alternative funding sources, non-E&G (i.e. C&G, Foundation):

Attach additional pages as necessary to support this request.

FLORIDA INTERNATIONAL UNIVERSITY
"SPECIAL PROJECT" BUDGET REQUEST
Submit by May 22, 1998

Please use a separate form for each item/issue Date: May 22, 1998

UNIT NAME: College of Engineering

PERSON REQUESTING: Gordon R. Hopkins

PURPOSE OF REQUEST*: **Human Potential Development & Technology**

*Link to specific unit goals in the 1998-99 Planning and Accountability Report (Identify appropriate goal number and page number).

PLEASE IDENTIFY THE TYPE AND QUANTITY OF FUNDS BEING REQUESTED:
**Please specify below the length for which funding is requested: **

_____Recurring ____X_____One year (1998-99) only

TYPE OF FUNDS:	FTE	TITLE	RATE
POSITIONS:			
9-month Faculty			
12-month Faculty	1.0	Director	100,000
A&P			
USPS			

Narrative Justification for Position Request:

The College is requesting a funds to hire a Director for the Human Potential Development & Technology Program.

OPERATING BUDGET:	$ AMOUNT
OPS	
OCO	
OTHER (Expense)	

Narrative Justification for operating budget. Please include an itemized budget with a description of how current resources will not suffice.:

List potential alternative funding sources, non-E&G (i.e. C&G, Foundation):

Attach additional pages as necessary to support this request.

FLORIDA INTERNATIONAL UNIVERSITY
"SPECIAL PROJECT" BUDGET REQUEST
Submit by May 22, 1998

Please use a separate form for each item/issue Date: May 22, 1998

UNIT NAME: College of Engineering

PERSON REQUESTING: Gordon R. Hopkins

PURPOSE OF REQUEST*: **Manufacturing Research Center (MRC)**

*Link to specific unit goals in the 1998-99 Planning and Accountability Report (Identify appropriate goal number and page number).

PLEASE IDENTIFY THE TYPE AND QUANTITY OF FUNDS BEING REQUESTED:
**Please specify below the length for which funding is requested: **

_____Recurring ___X_____One year (1998-99) only

TYPE OF FUNDS:	FTE	TITLE	RATE
POSITIONS:			
9-month Faculty			
12-month Faculty	.50	Director	50,000
A&P	1.00	Project Engineer	57,000
	1.00	Project Engineer	57,000
	1.00	Project Engineer	57,000
USPS	1.00	Secretary	24,000

Narrative Justification for Position Request:

The positions are for engineers and staff to operate the design, rapid prototyping, process development, machining, and fabrication with our facilities and equipment.

OPERATING BUDGET:	$ AMOUNT
OPS	46,000
OCO	6,000
OTHER (Expense)	68,000

Narrative Justification for operating budget. Please include an itemized budget with a description of how current resources will not suffice.:

The College is requesting funds to provide staff for the facilities and equipment obtained from a DARPA research grant ($1,000,000), industry matching and private donations.

List potential alternative funding sources, non-E&G (i.e. C&G, Foundation):

Attach additional pages as necessary to support this request.

FLORIDA INTERNATIONAL UNIVERSITY
"SPECIAL PROJECT" BUDGET REQUEST
Submit by May 22, 1998

Please use a separate form for each item/issue Date: May 22, 1998

UNIT NAME: College of Engineering

PERSON REQUESTING: Gordon R. Hopkins

PURPOSE OF REQUEST*: **Scientific & Research Computing Center**

*Link to specific unit goals in the 1998-99 Planning and Accountability Report (Identify appropriate goal number and page number).

PLEASE IDENTIFY THE TYPE AND QUANTITY OF FUNDS BEING REQUESTED:
**Please specify below the length for which funding is requested: **

_____Recurring ___X_____One year (1998-99) only

TYPE OF FUNDS:	FTE	TITLE	RATE
POSITIONS:			
9-month Faculty			
12-month Faculty			
A&P	1.00	Coordinator of Operations	50,000
	1.00	Coordinator of Applications	50,000
USPS			

Narrative Justification for Position Request:

The College is requesting funds to hire 2 Coordinator positions for the Scientific & Research Computing Center.

OPERATING BUDGET:	$ AMOUNT
OPS	160,000
OCO	30,000
OTHER (Expense)	80,000

Narrative Justification for operating budget. Please include an itemized budget with a description of how current resources will not suffice.:

The operating budget is needed to support the Scientific & Research Computing Center that will not only serve the College of Engineering but also the International Hurricane Center, as well as other centers. Funds are also needed for a digital library which will need support staff to instruct and guide students.

List potential alternative funding sources, non-E&G (i.e. C&G, Foundation):

Attach additional pages as necessary to support this request.

FLORIDA INTERNATIONAL UNIVERSITY
"SPECIAL PROJECT" BUDGET REQUEST
Submit by May 22, 1998

Please use a separate form for each item/issue Date: May 22, 1998

UNIT NAME: College of Engineering

PERSON REQUESTING: Gordon R. Hopkins

PURPOSE OF REQUEST*: **Water Research Center**

*Link to specific unit goals in the 1998-99 Planning and Accountability Report (Identify appropriate goal number and page number).

PLEASE IDENTIFY THE TYPE AND QUANTITY OF FUNDS BEING REQUESTED:
**Please specify below the length for which funding is requested: **

_____Recurring _____X____One year (1998-99) only

TYPE OF FUNDS:	FTE	TITLE	RATE
POSITIONS:			
9-month Faculty			
12-month Faculty			
A&P			
USPS	1.00	Secretary	19,290

Narrative Justification for Position Request:

The College is requesting a USPS line in order to meet the increase in clerical and administrative work.

OPERATING BUDGET:	$ AMOUNT
OPS	30,997
OCO	7,210
OTHER (Expense)	38,309

Narrative Justification for operating budget. Please include an itemized budget with a description of how current resources will not suffice.:

The College needs funding for a USPS line in order to meet the increase in clerical and administrative work.

List potential alternative funding sources, non-E&G (i.e. C&G, Foundation):

Attach additional pages as necessary to support this request.

9. UNIVERSITY OUTREACH

a. Off- Campus Goals:

1. Improve the quality and quantity of course offerings via FEEDS in several ways. One tool used to improve the quality of our courses is the evaluation form given to students in order to get feedback on the technical delivery of the courses. Training seminars for instructors have also been offered in order to improve their performance in class. Equipment has been upgraded in order to improve the production of our courses.

   The quantity of course offerings will improve due to the move to the new facilities in the Library, which has increased the number of electronic classrooms from two to three. This offers an additional facility in which to schedule more distance learning courses. Also, FEEDS currently has space allocated in the Center for Engineering and Applied Science (CEAS) for two electronic classrooms, two control rooms and a production room. This will also increase the number of courses offered.

2. Increase graduate and undergraduate enrollments for FEEDS courses by at least 50% per year for the next two years, and 25% per year for the following three years. Actual figures for student enrolments will be used to measure success in this area.

3. Increase faculty participation on FEEDS courses by 50% per year, for 100% participation within the next 5 – 10 years. Actual course offerings will be used to measure success in this area.

4. Purchase of equipment for the electronic classrooms at CEAS. Items that need to be purchased include equipment for two fully robotic classrooms including routing switchers and dubbing equipment; two PictureTel systems; equipment needed to store and clean tape stock; one personal computer for the office; and tables, chairs, white boards and workstations for the instructors.

5. To support the operation of the new FEEDS facility in CEAS, a part-time broadcast engineer will have to be hired in order to maintain the equipment in the new electronic classrooms. The current broadcast engineer is an Instructional Media services (IMS) employee who will have to be replaced by a FEEDS employee once courses are delivered from CEAS. Also, a full-time operation is started at CEAS. It is currently an OPS position with the potential of affecting the FEEDS operation should the current employee find a permanent position somewhere else. This position is critical since the Studio Manager is responsible for the day-to-day operation of the studios, the hiring and training of student assistants to operate video cameras, and the shipping and handling of tapes and course materials.

b. There are no anticipated changes in the content, location or governance of existing programs.

c. Continuing Education FTEs by College/School

CONTINUING EDUCATION FTE BY COLLEGE/SCHOOL

COLLEGE OR SCHOOL	Actual 1995/1996		Goal 1996/1997		Actual 1996/1997		Goal 1997/1998		Goal 1998/1999	
	Ungrad	Grad	Undgrad	Grad	Ungrad	Grad	Ungrad	Grad	Ungrad	Grad
Engineering	19.7	14.3	21.0	15.0	4.5	16.5	5.5	17.5	6.5	19.0
TOTAL										

1. New Credit courses and/or program initiatives to serve adult students at off-campus locations or alternative scheduling such as mini-term, micro-term. None anticipated

2. New international programs planned to be offered for credit. None anticipated

3. New credit courses planned to be offered for professionals (licensure, relicensure, etc.) None anticipated

d. Continuing Education Units (CEUs) Generated - Noncredit Programs

NONCREDIT CONTINUING EDUCATION UNITS (CEUs)
One CEU = 10 Contact Hours

COLLEGE OR SCHOOL	Actual 1995/1996		Goal 1996/1997		Actual 1996/1997		Goal 1997/1998		Goal 1998/99		Goal 1998/99	
	CEUs	Enrollment	CEUs	Participant	CEUs	Enrollment	CEUs	Participant	CEUs	Particip.	CEUs	Particip.
Engineering												
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0

1. New non-credit courses and/or certificate programs to be offered for professionals (licensure, relicensure, ecertification, etc.).

None

e. Distance Learning - Development and delivery of distance learning programs (telecommunications)

DISTANCE LEARNING PROGRAMS AND ENROLLMENTS										
COLLEGE OR SCHOOL	Actual 1995/1996		Goal 1996/97		Actual 1996/1997		Goal 1997/98		Goal 1998/99	
	Prog.	Enrol.	Prog.	Enrol.	Prog.	Enrol.	Prog.	Enrol.	Prog.	Enrol.
Engineering	1	414	1	200	1	223	1	300	1	400
TOTAL										

1. New credit courses/programs planned to be offered via Distance Learning including certificate and degree completion.

All courses, with the exception of laboratory, thesis and independent study will be made available through distance learning.

2. New international programs planned to be offered for credit. None anticipated

3. New non-credit courses/programs planned to be offered including certificates. None anticipated

f. Study Abroad

STUDY ABROAD PROGRAMS AND ENROLLMENTS																
COLLEGE OR SCHOOL	Goal 1996/1997				Actual 1996/1997				Goal 1997/1998				Goal 1997/1998			
	Noncred		Credit		Noncred		Credit		Noncred		Credit		Noncred		Credit	
	Prg	Enr	Prg	Enr	Prg	Enr	Prg	Enr	Prg	Enr	Prg	Enr	Prg	Enr	Prg	Enr
Engineering	0	0	1	12	0	0	1	6	0	0	1	6	0	0	1	6
TOTAL																

1. New credit or non-credit study abroad courses/programs planned to be offered.

The College continues to develop its association with Monterrey Tech in Mexico and recruit greater number of its students to study at FIU. In addition, the College is currently developing ties with colleges/universities in Jamaica and Venezuela in order to offer students in those countries the opportunity to fulfill their degree requirements here at FIU.

f. SACS Notifications:

1. Distance learning and off-campus programs where students can receive 25% or more of the curriculum:

SACS was last notified of the FEEDS program in 1990. Currently, students can receive 25% or more of the curriculum through distance learning for the following degree programs: Master of Science in Construction Management, Master of Science in Electrical Engineering, Master of Science in Computer Engineering, and Master of Science in Engineering Management. Students registered for these courses may view the course material at various corporate sites around the state, as well as other state of Florida universities.

2. Distance learning and off-campus programs that are projected to offer more than 25% or more the curriculum.

None are projected at this time.

10. CAMPUS ISSUES

Proposed program changes in campus locations

The College of Engineering plans to move all its faculty and staff offices, teaching labs and research labs to the CEAS campus. A few teaching/research labs will continue to function in the ECS building. Those labs can not be moved to CEAS because of the non-availability of appropriate lab space in EAS.

Proposed faculty or staff relocations

None except the moves from ECS to EAS as stated above.

11. STRATEGIC THEMES

How does your unit contribute toward the implementation of the University's strategic themes. Refer to F I U: Reaching for the Top 1996, Second Edition, for explanation of these (See at www.fiu.edu/~provost). If these were clearly identified in the units long range goals and objectives stated in the first part of this report, then note goal number below. Otherwise answer questions as requested.

a. International: **GOALS 1 TO 8**

1. Summarize the most significant international activities currently being conducted.
2. State goals for international program initiatives.
3. How are your international programs evaluated? Specifically discuss 2 improvements resulting from program assessments.

b. Urban: **GOALS 1 TO 8**

1. Summarize the most significant programs that currently focus on the urban theme.
2. State goals for urban program initiatives.

c. Environmental: **GOALS 1 TO 8**

1. Summarize the most significant programs that currently focus on the environmental theme.
2. State goals for environmental program initiatives.

d. Health: **GOALS 1 TO 8**

1. Summarize the most significant programs that currently focus on the health theme.
2. State goals for health initiatives.

e. Information: **GOALS 1 TO 8**

1. Summarize the most significant programs that currently focus on the information theme.
2. State goals for information theme initiatives.

12. ADDITIONAL CRITICAL ISSUES WHICH NEED TO BE ADDRESSED

(Or comments on future activities which have not been addressed above.)

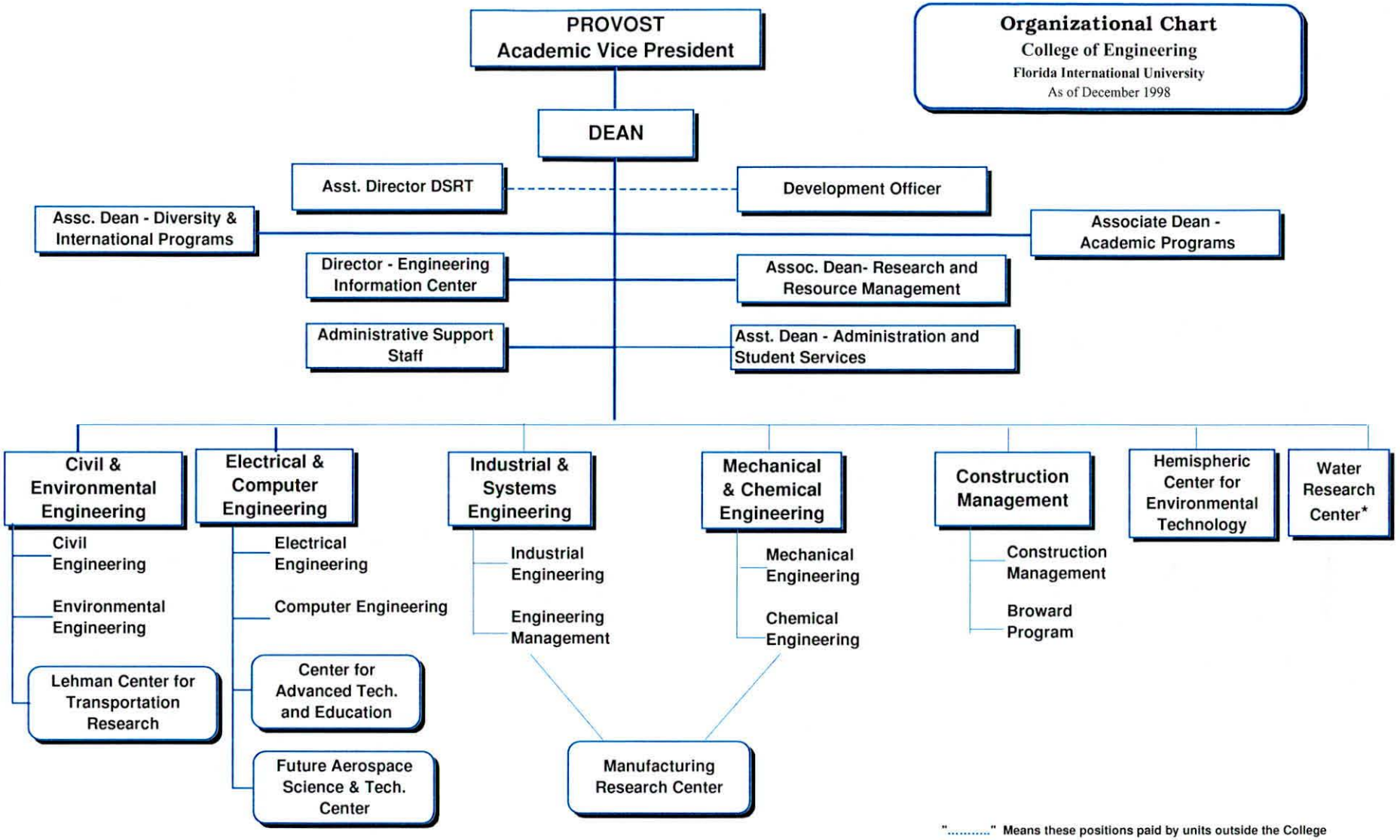
Location of the College in the CEAS has proved to be a major obstacle in meeting enrollment targets. There is not enough time for the students to commute between campuses. We have to find more effective ways to link CEAS with UP campus and provide full scale services at CEAS.

COLLEGE OF ENGINEERING
1998-2000 PLANNING AND ACCOUNTABILITY REPORT

EXCELLENCE IN PURSUIT OF UNIVERSITY GOALS AND STRATEGIC THEMES

COLLEGE OF ENGINEERING

MATRIX OF UNIVERSITY GOALS AND THEMES					
	International	**Urban**	**Environment**	**Health**	**Information**
I. Well Educated Students To Graduate a Well Educated, Technologically Sophisticated, and Ethnically Diverse Student Body, Who Can Think Critically about a Changing World; and to Continue to Enhance Undergraduate Teaching While Broadening Graduate and Professional Programs;	Goals: 1,3,4,5	Goals: 1,3,4,5	Goals: 1,3,4,5	Goals: 1,3,4,5	Goals: 1,3,4,5
II. Research & Creative Activities To Promote Research and Creative Activities Which Contribute to the Social, Artistic, Cultural, Economic, Environmental, Scientific, and Technological Foundations of the 21st Century;	Goals: 2,5,8	Goals: 2,5,8	Goals: 2,5,8	Goals: 2,5,8	Goals: 2,5,8
III. Applied Problem Solving To Solve Critical Social, Educational, Environmental, Health and Transportation Problems Through Applied Research and Service;	Goals: 6,7	Goals: 6,7	Goals: 6,7	Goals: 6,7	Goals: 6,7
IV. Strategic Themes To Be Recognized as a Leading Institution for Teaching and Research in the Areas of International, Environmental, Urban, Health, and Information;	Goals: 1 to 8	Goals: 1 to 8	Goals: 1 to 8	Goals: 1 to 8	Goals: 1 to 8
V. Ranking To Be Recognized as One of the Nation's Top Urban Public Research Universities, While Maintaining the Highest Quality of Undergraduate Programs;	Goals: 1 to 8	Goals: 1 to 8	Goals: 1 to 8	Goals: 1 to 8	Goals: 1 to 8
VI. Research I To Achieve Carnegie Foundation Research II Status by the Year 2001, and Research I Status by the Year 2008. To reach this goal in 2008, it is projected that for three years 2002/03 to 2004/05 we must award an average of 95 doctoral degrees, and receive $100 million in contracts and grants, $63 million from the Federal government.	Goals: 2,6,7,8	Goals 2,6,7,8	Goals: 2,6,7,8	Goals: 2,6,7,8	Goals: 2,6,7,8


PROVOST
Academic Vice President
Organizational Chart
College of Engineering
Florida International University
As of December 1998
DEAN
Asst. Director DSRT
Development Officer
Assc. Dean - Diversity & International Programs
Associate Dean - Academic Programs
Director - Engineering Information Center
Assoc. Dean- Research and Resource Management
Administrative Support Staff
Asst. Dean - Administration and Student Services
Civil & Environmental Engineering
Civil Engineering
Environmental Engineering
Lehman Center for Transportation Research
Electrical & Computer Engineering
Electrical Engineering
Computer Engineering
Center for Advanced Tech. and Education
Future Aerospace Science & Tech. Center
Industrial & Systems Engineering
Industrial Engineering
Engineering Management
Mechanical & Chemical Engineering
Mechanical Engineering
Chemical Engineering
Manufacturing Research Center
Construction Management
Construction Management
Broward Program
Hemispheric Center for Environmental Technology
Water Research Center*
"....." Means these positions paid by units outside the College
* WRC is affiliated with the Department of Civil & Environmental Engineering