# **College of Engineering Priorities for Campaign**

### **Capital Facilities (Projects Greater than \$2 million)**

	<u>Name</u>	Renovation or New	Esimated GSF	Estimated Project Cost	Description and Notes
1	Enhance and modernize instructional and research facilities and community space	Renovation	775,000	178,000,000	Upgrade the functionality and appearance of existing engineering facilities to support excellence in research and education (see attachments 1 and 2 for detail)
2	College Learning, Library and Service Center	New	143,000	50,000,000	Library, dean's administration, experiential learning, student collaboration, admissions, career services, advising, learning excellence programs, diversity programs (Carpenter Hall replacement)
	lew Space Penovations			50,000,000 178,000,000	
Subtot	al Capital			228,000,000	

#### Notes:

- (1) All costs are shown in 2003 dollars
- (2) The College of Engineering also expects to participate in the fundraising and to occupy a portion of the: i) New Life Sciences Technology Building,
  - ii) Physical Sciences Building, and iii) possibly a Computing and Informations Sciences and Engineering Building.

Date: 4/25/2003; Rev 10/9/2003; Rev 6/1/2004; Rev 5/24/2005; Rev 9/29/2005

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# **Position Support**

	Name	New or Existing	Endowment	Limited Term funds	Discipline, Description and Notes
1	15 Endowed Professorships	New	38,000,000	5,000,000	Necessary to grow faculty in Biomedical Engineering
2	15 Endowed Professorships	New	38,000,000	5,000,000	Necessary to grow faculty in 5 additional strategic areas: Advanced Materials, Nanoscience, Computation and Communication, Complex Systems, Energy and Environment
3	10 Endowed Professorships	Existing	25,000,000	5,000,000	Retention of senior star faculty and budget relief to enable growth in faculty
4	6 Term Chairs	Existing	6,000,000		Recruitment of strategic hires and retenion of star junior faculty
5	1 Visiting Distinguished Professor	New	3,000,000		Partial compensation and expenses for preeminent visitors
6	10 Endowed Instruction Enhancement Positions 4 Program Directors	New 1 New; 3 Existing	20,000,000	2,000,000	Instructors, lecturers and skilled laboratory instructional staff in nanotechnology, bio/biomedical engineering, computer engineering, energy and environmental eng, advanced materials ( 2 of the positions are for BME)  Director of Diversity, Director of Learning Enhancement and Educational Excellence, Director of Advising, Associate Dean for Undergraduate Programs
Subtota	l Position Support		138,000,000	17,000,000	

## Note:

The Biomedical Engineering campaign priorities included in this document are also summarized in Attachment 3

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## **Program Enhancement**

	Name	Existing or New	Endowment	<u>Limited Term funds</u>	Description and Notes
1	50 Teaching Assistantships (including tuition and stipend)	New	45,000,000	5,000,000	TA positions required to support increased teaching loads (10 of the TAs are for BME)
2	28 Teaching Assistant Stipends	Existing	8,000,000	3,000,000	Bring number of stipends to level of current tuition allocation
3	42 MEng Teaching Specialist Stipends	New	6,000,000	1,000,000	Part-time MEng TAs for instructional support (8 are for BME)
4	Biomedical Engineering Department	New	15,000,000	4,000,000	Department staff, department operating expenses, instruction and project expenses, Weill Medical College connections,
5	Faculty Start-Up	New/Existing	30,000,000	10,000,000	Partial funding for start-up packages for new faculty hires
6	Instructional Laboratories	New/Existing	50,000,000	12,000,000	Instructional laboratory equipment replacement, renewal, and technology enhancement (15% for BME)
7	Experiential Learning	New/Existing	5,000,000	250,000	Capstone design projects, undergraduate research, interdisciplinary student teams, international exchange, MEng design projects (10% for BME)
8	International Programs and Initiatives	New/Existing	5,000,000	250,000	International initiatives and academic programs with students and faculty (transnational)
9	Grant Matching Funds	New/Existing	16,000,000	2,000,000	Portion of research cost sharing mandated by granting agencies
10	Diversity and Faculty Recruitment	New/Existing	20,000,000	3,000,000	Minority Programs, Women's Programs (programs, operations, support staff), also Dual Career Fund
11	Institute for Sustainable Energy Systems	New/Existing	15,000,000		Implementation of university focus on sustainable energy and global sustainable development (research and education).
Subtotal Program Enhancement				40,500,000	

## **Student Aid**

	Name	Existing or New	Endowment	Limited Term Funds	Description and Notes
					Full fellowship award; brings number of fellows close to
1	80 Graduate PhD fellowships	New	88,000,000	8,000,000	peers, also focus on women and URM (10 of the Fellowships are for BME)
	•				•
2	28 Graduate MEng partial tuition fellowships	New	7,000,000	500,000	Half-tuition fellowship for recruiting
3	12 Graduate MEng full tuition fellowships	New	7,000,000	1,000,000	URM and Women 3-2, 4-1 programs
Subtote	al Student Aid		102,000,000	9,500,000	
Subtota	ai Student Aid		102,000,000	9,500,000	
	Grand Total	750,000,000	455,000,000	295,000,000	
Naming O	pportunities - This funding would provide for som	a of the above college	needs		
Training O	pportunities - This funding would provide for som	ic of the above conege	necus.		
1	Endow (name) the College of Engineering	Existing	200,000,000		
2	Dean's Unrestricted Fund for Excellence	Existing	50,000,000		
3	Endow (name) Department - AEP	Existing	25,000,000		
	Endow (name) Department - BME	New	50,000,000		
	Endow (name) Department - CBE	Existing	30,000,000		
	Endow (name) Department - CEE	Existing	35,000,000		
	Endow (name) Department - EAS	Existing	25,000,000		
	Endow (name) Department - ECE	Existing	75,000,000		
	Endow (name) Department - MSE	Existing	25,000,000		
	Endow (name) Department - ORIE	Existing	30,000,000		
	Endow (name) Department - TAM	Existing	20,000,000		
4	Endow (name) Department Chair - AEP	Existing	3,000,000		
	Endow (name) Department Chair - CEE	Existing	3,000,000		
	Endow (name) Department Chair - EAS	Existing	3,000,000		
	Endow (name) Department Chair - ECE	Existing	3,000,000		
	Endow (name) Department Chair - MSE	Existing	3,000,000		
	Endow (name) Department Chair - ORIE	Existing	3,000,000		
	Endow (name) Department Chair - TAM	Existing	3,000,000		
5	Endow 3 Associate Deans	Existing	6,000,000		Three Associate Deans (faculty)

College of Engineering Fundraising Priority Planning - Page 4

#### Attachment 1

College of Engineering Fundraising Priority Planning

Capital Renovation Projects (Enhancement of Engineering facilities to support excellence in education and research) - all costs are in 2003 dollars

### Description and Notes for Item 1 on Page 1: Enhance and modernize instructional and research facilities and community space

			Estimated	
Name	Renovation or New	Esimated GSF	Project Cost	Description and Notes
Bard Hall	Renovation	28,525	12,100,000	
Clark Hall	Renovation	43,278	9,500,000	
Grumman Hall	Renovation	15,492	3,600,000	
Hollister Hall	Renovation	88,842	24,000,000	
Kimball Hall	Renovation	23,861	7,700,000	
Olin Hall	Renovation	91,893	25,100,000	
Phillips Hall	Renovation	68,556	18,500,000	
				Cost projected at reduced rate based on more recent
Rhodes Hall	Renovation	75,218	10,000,000	construction date
Rockefeller Hall	Renovation	1,391	400,000	
				Cost projected at reduced rate based on more recent
Snee Hall	Renovation	49,764	5,000,000	construction date
Thurston Hall	Renovation	45,645	16,400,000	
Upson Hall	Renovation	123,245	33,300,000	
Ward Lab	Renovation	<u>26,563</u>	12,200,000	
Total		682,273	177,800,000	

#### Notes:

<sup>(1)</sup> Renovations do not include already upgraded/renovated space

<sup>(2)</sup> Mechanical systems upgrades are included where replacement is required

<sup>(3)</sup> If Carpenter Hall is not replaced (Page 1), then Carpenter Hall must also be upgraded and renovated as indicated in Attachment 2 at an additional approximate cost of \$11.2M for 44,337 GSF (\$1.5M will be invested summer 2004 for critical upgrades)

Attachment 2 - Renovation Cost Detail (all costs are in 2003 dollars)

4/24/03 cel

	Systems	and	Infrastructure
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	Mechanical S	ystems		Network	Structure/Public	Space							
		Electrical &				Foyer/Hallwa	ļ		Asbestos	Elevator	Fire Alarm		
Building	<u>HVAC</u>	Emer Power	Plumbing	Network	Façade	<u>ys</u>	Windows	Roof	Abatement	<u>Upgrade</u>	<u>Upgrade</u>	Loading Dock	
Cost has Davilding to Domesto													
Cost by Building to Renovate	d 000 000	d 1 000 000	Ф. 1.000.000	ф. 200.000	¢ 1,000,000	ф. 226.250	d 1.700.000			ф <b>500.000</b>			
Bard Hall	\$ 800,000		\$ 1,000,000	\$ 300,000	\$ 1,000,000		\$ 1,500,000			\$ 500,000			
Carpenter Hall		\$ 110,000		\$ 300,000		\$ 367,210							
Clark Hall				\$ 300,000		\$ 358,440							
Dearborn Place (excluded)													
Grumman Hall		\$ 100,000		\$ 300,000	w/upson	\$ 128,310	w/upson				w/upson		
HVL (excluded)													
Hollister Hall	\$ 3,000,000				\$ 2,500,000	\$ 735,810	\$ 1,500,000						
Hydraulics Lab Garage (excluded)													
Kimball Hall		\$ 500,000	\$ 500,000	\$ 300,000	\$ 750,000	\$ 197,620	\$ 200,000				\$ 200,000		
Newcomb Cabin (excluded)													
Olin Hall	\$ 4,000,000	\$ 500,000	\$ 100,000	\$ 300,000		\$ 761,080	\$ 2,000,000	\$ 300,000	\$ 100,000				
Phillips Hall	\$ 2,000,000				\$ 2,000,000	\$ 567,800	\$ 1,000,000						
Rhodes Hall						\$ 622,970							
Rockefeller Hall						\$ 11,520							
Snee Hall				\$ 300,000		\$ 412,160							
Thurston Hall	\$ 2,000,000	\$ 800,000	\$ 500,000	\$ 300,000	\$ 750,000	\$ 378,040	\$ 1,500,000			\$ 150,000			
Tran Tech Bldg (excluded)													
Upson Hall	\$ 1,500,000	\$ 800,000	\$ 500,000	\$ 300,000	\$ 3,000,000	\$ 1,020,740	\$ 2,000,000	\$ 300,000			\$ 200,000	\$ 500,000	
Ward Lab	\$ 2,000,000	\$ 1,000,000	\$ 1,000,000	\$ 300,000	\$ 1,000,000	\$ 220,000	\$ 750,000	\$ 300,000	\$ 100,000	\$ 150,000			
Total Cost	\$15,300,000	\$ 4,810,000	\$ 3,600,000	\$ 3,000,000	\$ 11,000,000	\$ 6.017.950	\$ 10.450.000	\$ 900,000	\$ 200,000	\$ 800,000	\$ 400,000	\$ 500,000	
	+,500,000	,,	÷ 2,300,000	,,	,500,000	+ =,=17,>00	+, 100,000	+ 200,000	50,000	- 500,000	00,000	+ 200,000	
								sub-total for i	nechanical syste	ems and buildin	g infrastructure	\$ 56,977,950	

Note:

This includes \$11.2M for renovation of Carpenter Hall, which may not be needed if Carpenter Hall is replaced in the near future.

Attachment 2 - Page 1

Attachment 2 - Renovation Cost Detail (all costs are in 2003 dollars)

	Renovations

	Library	Instruction					Offices	Public Spaces	Research	Other	Building Total
										Instruction/Re	<u>s</u>
		Instruction	Instruction	Instruction	Instruction	Instruction		Lounge/Rece		earch/Other	
<u>Building</u>	<u>Library</u>	Classrooms	<u>Labs</u>	Lecture Halls E	Reading/study	Seminar	Offices All	ption Conf	rence Research La	bs Support	
											Sub-Total Cost by Total Cost by
Cost by Building to Renovate											by Building Building*
Bard Hall		\$ 86,600	\$ 983,520				\$ 1,744,275		7,740 \$ 2,623,7	12 \$ 36,750	
Carpenter Hall	\$ 7,475,000	\$ 272,400					\$ 2,492,588		0,460		\$ 11,217,658 \$ 11,217,658
Clark Hall			\$ 667,080	\$	102,960		\$ 2,931,825	\$ 64,000 \$ 1	0,760 \$ 4,955,3	98	\$ 9,490,463 \$ 9,490,463
Dearborn Place (excluded)											\$ - \$ -
Grumman Hall			\$ 72,360				\$ 569,400		\$ 2,449,9	72	\$ 3,620,042 \$ 3,620,042
HVL (excluded)											\$ - \$ -
Hollister Hall		\$ 1,035,400	\$ 2,076,840	\$ 721,825 \$	5 262,340		\$ 7,174,538	\$ 532,600 \$ 4	4,820 \$ 3,828,9	14 \$ 314,020	\$ 24,087,137 \$ 24,087,137
Hydraulics Lab Garage (excluded)											\$ - \$ -
Kimball Hall			\$ 644,040	\$ 650,975 \$	109,980	\$ 99,450	\$ 1,450,313	\$	2,520 \$ 1,973,4	96 \$ 55,790	\$ 7,684,184 \$ 7,684,184
Newcomb Cabin (excluded)											\$ - \$ -
Olin Hall		\$ 771,000	\$ 1,600,200	\$ 687,700 \$	740,740	\$ 130,975	\$ 6,655,594	\$ 191,200 \$ 2	9,240 \$ 5,602,7	58 \$ 399,630	\$ 25,120,117 \$ 25,120,117
Phillips Hall		\$ 969,500	\$ 3,559,320	\$	267,800		\$ 3,861,731		0,400 \$ 3,568,5	72 \$ 194,880	\$ 18,531,403 \$ 18,531,403
Rhodes Hall			\$ 4,421,880	\$	99,840		\$ 7,711,275	\$ 286,400 \$ 8	8,560 \$ 3,119,2	28	\$ 17,160,153 \$ 10,000,000
Rockefeller Hall			\$ 414,720								\$ 426,240 \$ 426,240
Snee Hall		\$ 199,900	\$ 1,550,880	\$	329,680	\$ 377,000	\$ 2,699,044	\$ 40,400 \$ 1	3,020 \$ 4,623,1	50 \$ 80,780	\$ 10,776,014 \$ 5,000,000
Thurston Hall		\$ 251,100	\$ 3,715,920	\$ 539,500 \$	334,260	\$ 286,000	\$ 1,657,013	\$ 86,800	\$ 3,240,6	08 \$ 47,740	\$ 16,436,981 \$ 16,436,981
Tran Tech Bldg (excluded)											\$ - \$ -
Upson Hall		\$ 447,300	\$ 3,890,160	\$ 761,800 \$	759,460		\$ 9,056,531		5,200 \$ 5,993,0	- , , , , , , ,	
Ward Lab		\$ 60,000	\$ 864,000				\$ 853,125	\$ 200,000 \$ 2	0,000 \$ 3,094,0	00 \$ 35,000	<u>\$ 12,186,125</u> <u>\$ 12,186,125</u>
Total Cost	\$ 7,475,000	\$ 4,093,200	\$ 24,460,920	\$ 3,361,800 \$	2,907,060	\$ 893,425	\$ 48,857,250	\$ 2,707,800 \$ 3,2	2,720 \$ 45,072,9	16 \$ 2,086,630	\$ 202,136,671 \$ 189,200,504

sub-total for NASF pre-Snee/Rhodes adj \$ 145,158,721 \$ 202,136,671

Notes:

Attachment 2 - Page 2

<sup>\*</sup>Rhodes Hall and Snee Hall renovation costs projected at reduced rate based on more recent construction dates

Attachment 3 - Summary of Biomedical Engineering Campaign (these items are included in the College priority list)

	Name	New or Existing	Endowment	<u>Limited Term funds</u>	Description and Notes
1	15 Endowed Professorships	New	38,000,000	5,000,000	Necessary to grow faculty in Biomedical Engineering
2	2 Endowed Instruction Enhancement Positions	New	4,000,000	400,000	Instructor and skilled laboratory technical staff for biomedical engineering
3	10 Teaching Assistants	New	10,000,000	1,000,000	TA positions required to support teaching load in BME
4	8 MEng Part-Time Teaching Assistants	New	1,000,000	200,000	Part-time MEng TAs for instructional support
5	Biomedical Engineering Department	New	15,000,000	4,000,000	Department staff, department operating expenses, instruction and project expenses, Weill Medical College connections
6	Instructional Laboratories	New	7,500,000	1,500,000	Instructional laboratory equipment and technology enhancement
7	Experiential Learning	New	1,000,000	50,000	Capstone design projects, undergraduate research, interdisciplinary student teams, international exchange, MEng design projects
8	10 Graduate Fellowships	New	11,000,000	1,000,000	Full fellowship award; brings number of fellows close to peers, also focus on women and URM
9	Faculty Start-Up	New	5,000,000	3,000,000	Partial funding for start-up packages for new faculty hires in BME
Total			92,500,000	16,150,000	