CS/BEM					
Ontional					
Optional		Units Per Term			
First Year		1st	2nd		
ACM 11 ^{CS 8} BEM 102 CORE IP 4, BEM 2	Intro. to Matlab and Mathematica Introduction to Accounting	-	- 9	- 6	
BEM 107 CS 8, CORE IP 4	Applied Corporate Finance and Investment Banking	-	-	9	
Ch 1 ^{CORE 3} Ch 3 x ^{CORE 4}	Freshman Chemistry Freshman Chemistry Laboratory	6	9	- 6	
Ec 11 CORE IP 4, BEM 1	Introduction to Economics	9	<u>-</u> -	-	
HUM 2 CORE IP 3	American History	9			
HUM/PI 9 CORE IP 3	Knowledge and Reality		9		
Ma 1 CORE 1 Ph 1 CORE 2	Freshman Mathematics (analytical)	9	9		
IST 4 CORE 5	Freshman Physics	9	9	9	
	PE CORE IP 2		3		
		42	48	48	
		42	40	40	
		Units Per Term			
Second Year BEM 104 BEM 2	Investments	1st	2nd 9	3rd	
BEM 114 BEM 4	Behavioral Finance	-	-	9	
BEM/Ec 150 BEM 4	Business Analytics	-	-	9	
CS 1 ^{CS 1} CS 2 ^{CS 1}	Intro. to Computer Programming	9	- 9	-	
CS 4 ^{CS 1}	Introduction to Programming Methods Fundamentals of Computer Programming		9		
CS 24 ^{CS 2}	Introduction to Computing Systems	-	-	9	
CS 101 ^{CS 8}	Projects in Machine Learning	9			
CS/CNS/EE 156 ab ^{CS 3}	Learning Systems	9		9	
CMS/CS/CNS/EE 155 ^{CS 3, 4}	Machine Learning Data Mining	-	12		
CNS/SS/Psy 110b E102 ^{CS 8}	Use and Abuse of Statistics in Science Scientific and Technology Entrepreneurship			!9	
Ma 2 ^{CS 5,}	Differential Equations	9		-	
Ma 3 ^{CS 5, BEM 1} Ma 6a ^{CS 5, BEM5}	Intro. Probability and Statistics	- 9	9	-	
Ma 6a ^{CS 5, BEM5} Ph 2 a ^{CS 7}	Intro to Discrete Mathematics Sophomore Physics	9	-		
	, , , , , , , , , , , , , , , , , , , ,	54	48	45	
TUTLAN		4-1	O ·	•	
Third Year BEM 103 BEM 2	Introduction to Finance	1st	2nd 9		
BEM 105 BEM 2	Options	9		-	
CMS/CS/EE 144 ^{CS 4}	Networks: Structure Economics		12		
CS 11 ^{CS 1}	Language			3	
CS 21 ^{CS 2}	Decidability and Tractability	-	9		
CS 38 ^{CS 2} CS 121 ^{CS 4}	Introduction to Algorithms Introduction to Relational Databases	9	-	9	
CS 122 ^{CS 4}	Database System Implementation	-	9	-	
EC 122 BEM 1	Econometrics	9		-	
Ec 123 BEM 4	Macroeconomics			9	
E 10 ^{CS 6, BEM 3} CS171 ^{CS 8}	Technical Seminar Presentations	12		3	
HPS/PI 137 CORE IP 4	Intro to Computer Graphics Lab Minds, Brain, and Selves	12		9	
Ma 112ab ^{CS 8, BEM 4}	Statistics		9	_	
PE CORE IP 2				3	
Ph 3 CORE IP 3, BEM5	Modern Optics Lab	39	- 48	6 42	
		39	40	42	
Fourth Year			2nd	3rd	
ACM/EE 116 BEM 106 BEM 2	Probability Models Competitive Strategy	9	9		
BEM 110 BEM 2	Venture Capital	-	9		
Bi 1 CORE IP 1	Freshman Biology	-	-	9	
CS/EE 145 ^{CS 8, BEM5}	Projects in Networking			9	
CNS/Bi/EE/CS 186 ^{CS 3, BEM5} E 11 ^{CS 6, BEM 3}	Vision: From Computational Theory to Neuronal Mechanisms Written Technical Communication in EAS	-	12	- 3	
EST/EE/ME 109	Energy Technology and Policy	9		3	
Ma 17	How to Solve It	4			
Ph 2b ^{CS 7, BEM5}	Physics	0	9		
PS 12 CORE IP 5, BEM 4 PS/Ec 172 BEM 1	Intro Political Science Game Theory	9	- 9	_	
PS 135	Analyzing Legislative Elections	9	J		
PE CORE IP 2		3			
	Electives	-	-	-	
		43	48	21	
				526	
				520	
HPS/H 166 CORE IP 4	Historical Perspectives on the Relations Between Science an	9			
Ec 135	Economics of Uncertainty and Information	9			
Ec 140	Economic Progress		9		
Ec 105 BEM/Ec 185	Industrial Organization Political Economy of Corporate Governance	9			
Ec 129	Economic History of the United States		9		
CNS/Psy/Bi 131	Psychology of Learning and Motivation		9		
CS 116	Reasoning about Program Correctness	9			
CS/SS 152 PS/SS 139	Introduction to Data Privacy Comparative Politics	9	9		
PS 141ab	A History of Budgetary Politics in the United States		9	9	
Ec 121 ab	Theory of Value	9	9		
HPS/PI 136 : HPS/PI 138 HPS/PI 135	Happiness and the Good Life : Human Nature and Society Moral Philosophy and the Brain		9		
CS/EE 143	Communication Networks	9	3		
CS/SS/Ec 149	Introduction to Algorithmic Economics		9		
Psy 15	Social Psychology			9	
ACM 216 EE/Ma/CS 127	Markov Chains, Discrete Stochastic Processes and Application Error Correcting Codes	uns.	9		
ACM/CS 127	Introduction to Statistical Inference		9		
BEM 111	Quantitative Risk Management		<u> </u>	9	
ACM 257	Special Topics in Financial Mathematics			9	
E/Me 103	Management of Technology			9	
EE/CS 147	Digital Ventures Design	9		-	
CS 141 E 120	Hack Society Data Visualization Projects			9	
Ec / Psy 109	Frontiers in Behavioral Econ	9	-	-	
E CTPSY 109	Frontiers in Benavioral Econ	9	-	-	

- 1. Ec 11 (Intro to Econ), Ec 122 (Econometrics), MA 3 (Intro Probability and Statistics), PS/Ec 172 (Game Theory).
- 2. BEM 102 (Accounting), BEM 103 (Intro to Finance), BEM 104 (Investments), BEM 105 (Options), BEM 106 (Competitive Strategy) and BEM 110 (VC). 3. Writing/oral presentation courses.
- 4. Five courses, to be chosen from the menu (may be taken pass/fail): any BEM courses (excluding the ones listed under 1 and 2 above), Ec 105 (Industrial Organization), 106 (Topics in Applied Industrial Organization), 116 (Contemporary Socioeconomic Problems), 121 ab (Theory of Value), 123 (Macroecon), 129 (Economic History of US), 130 (Economic History of Europe Middle Ages - 20th Century), 131 (???), 132 (???), 135 (Economics of Uncertainty and Information), 145 (Public Finance), Ec/PS 160 abc (Lab Experiments in SS), PS 12 (Intro Political Science), Psy 15 (Social Psych), Psy 20 (Intro Cognitive Psych), ACM 113 (Mathematical Optimization), ACM/EE/ CMS 116 (Intro Stochastic Processes and Modeling), AN/PS 127 (Corruption), Ge/ESE 118 (Methods in Data Analysis), Ma 112a (Statistics), Ma/ACM144 ab (Probability), Law 134 (Law and Technology), 135 (History of Anglo-American Law). Other courses with permission of BEM option representative. (PS 12, Ma112, BEM/Ec 150, BEM 114, Ec121ab, Ec123) 5. 45 additional units of science (including anthropology, economics, political science, psychology, social science), mathematics, and engineering courses; NO LABS, NO # < 10. (CS, math, ACM courses)
- 6. Passing grades must be earned in a total of 486 units, including all courses used to satisfy the above requirements.

CORE Requirements

Done: 1. Ma 1abc 2. Ph 1abc 3. Ch 1ab

4. IST 4 Ch 3x In Progress:

1. Bi 1 / Bi 1x 2. PE (3 of 9 fulfilled) 3. Ph 3 (0 of 1 fulfilled)

4. Humanities (18 of 36 fulfilled) (Hum 2, HUM/PI 9, any 2 HPS courses HPS 135, PI 137)

5. SS (18 of 36 fulfilled) (**Ec 11**, Ps 12, BEM 103, **104**) 6. Advanced Hum/SS (0 of 36 fulfilled) (Ec 123, BEM 110, BEM 106, BEM 114)

- 1 CS fundamentals. CS 1; CS 2; CS 4; CS 11,
- 2 Intermediate CS. CS 21; CS 24; CS 38.
- 3 CS Project Sequence. One of the following
 - a An undergraduate thesis (CS 80abc) supervised by a CS faculty member. b A project in computer science, mentored by the student's academic adviser or a sponsoring faculty member. The sequence must extend at least two quarters and total at least 18 units of CS 81abc.
 - c Any of the following three-quarter sequences. Each of the sequences is
 - expected to be available (nearly) yearly.
 - i Databases: CS 121, CS 122, CS 123. Graphics: CS/CNS 174 and two other CS 17x courses.
 - iii Learning & Vision: At least three courses chosen from ME/CS 132 ab, EE/CNS/CS 148, **CMS/CS/CNS/EE 155**, **CS/CNS/EE 156 ab**, CS/CNS/ EE 159, CNS/Bi/EE/CS 186, CNS/Bi/Ph/CS/NB 187, ACM/CS/EE 218, including at least one of 132 b, 148, **156 b**, 159, or 186.
 - iv Networking & Distributed Systems: CS/EE 145 combined with two
 - courses chosen from CS 142, CS/EE 143, and CS/EE 144. v Quantum & Molecular Computing: At least three courses chosen from
 - BE/CS/CNS/Bi 191 ab, BE/CS 196 ab, BE/ChE 130, Ph/CS 219 abc. vi Robotics: At least three courses chosen from ME 115 ab, ME/CS 131,
 - ME/CS 132 ab, EE/CNS/CS 148, CNS/Bi/EE/CS 186.
- 4 Advanced CS. A total of 72 CS units that are not applied to requirements 1 or 2 above, and that either (i) are numbered CS 114 and above or (ii) are in satisfaction of requirement 3 above. Included in these units must be at least one of CS 122, CS 124, CMS/CS 139, or CS 151.
 - CMS/CS/CNS/EE 155 (12 of 72) CS/CNS/EE 156ab (18 of 72) CNS/Bi/EE/CS 186 (12 of 72) CS 121 (9 of 72) CS 122 (9 of 72) CS 144 (12 of 72)
- 5 Mathematical fundamentals. Ma 2; Ma 3; Ma/CS 6a or Ma 121a.
- 6 Communication fundamentals. E10; E11.

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- 7 Scientific fundamentals. In addition to all above requirements, 18 units selected from the following courses Bi 8, Bi 9, Ch 21abc, Ch 24, Ch 25, Ch 41abc, Ph 2abc, Ph 12abc, or any 100+ course in Bi, Ch, or Ph.
- 8 Breadth. In addition to all above requirements, 36 units in Ma, ACM (ACM 11, CS 171, CS145, CS101), or CS; 18 units in EAS or Ma (E102, EE/EST/ME 109, Ma112); and 9 units not labeled PE or PA (BEM 107).