

2017-2018 B.S. in Civil & Environmental Engineering Sample Curriculum

FRESHMAN YEAR		UNITS	JUNIOR YEAR		UNITS
1st Quarter			1st Quarter		
Chemistry and Biochemistry 20A — Chemical Structure		4	Civil and Environmental Engineering 120 — Principles of Soil Mechanics		4
Civil and Environmental Engineering 1 — Civil Engineering and Infrastructure		2	Civil and Environmental Engineering 135A — Elementary Structural Analysis		4
English Composition 3 — English Composition, Rhetoric, and Language		5	Civil and Environmental Engineering 150 — Introduction to Hydrology		4
Mathematics 31A — Differential and Integral Calculus		4	Civil and Environmental Engineering 153 — Introduction to Environmental Engineering Science		4
2nd Quarter			2nd Quarter		
Chemistry and Biochemistry 20B/20L — Chemical Energetics and Change/General Chemistry Laboratory		7	Chemical Engineering 102A (Thermodynamics I) or Mechanical and Aerospace Engineering 105A (Introduction to Engineering Thermodynamics)		4
Mathematics 31B — Integration and Infinite Series		4	Major Field Elective†		4
Physics 1A — Mechanics		5	Natural Science Course		4 or 5
3rd Quarter			3rd Quarter		
Mathematics 32A — Calculus of Several Variables		4	Civil and Environmental Engineering 103 — Applied Numerical Computing and Modeling in Civil and Environmental Engineering		4
Physics 1B — Oscillations, Waves, Electric and Magnetic Fields		5	Civil and Environmental Engineering 110 — Introduction to Probability and Statistics for Engineers		4
Physics 4AL — Mechanics Laboratory		2	Major Field Electives (2)†		8
HSSEAS GE Elective*		5			
SOPHOMORE YEAR		UNITS	SENIOR YEAR		UNITS
1st Quarter			1st Quarter		
Civil and Environmental Engineering 91 — Statics		4	HSSEAS GE Elective*		5
Mathematics 32B — Calculus of Several Variables		4	Major Field Electives (2)†		8
Physics 1C — Electrodynamics, Optics, and Special Relativity		5	Technical Breadth Course*		4
HSSEAS Ethics Course		4	2nd Quarter		
2nd Quarter			HSSEAS GE Elective*		5
Civil and Environmental Engineering 102 - Dynamics of Particles and Bodies		2	Major Field Electives (2)†		8
Materials Science and Engineering 104 (Science of Engineering Materials) or Civil and Environmental Engineering C104 (Structure, Processing, and Properties of Civil Engineering Materials)		4	Technical Breadth Course*		4
Civil and Environmental Engineering 108 — Introduction to Mechanics of Deformable Solids		4	3rd Quarter		
Mathematics 33A — Linear Algebra and Applications		4	HSSEAS GE Elective*		5
3rd Quarter			Major Field Elective †		4
Civil and Environmental Engineering M20 (Introduction to Computer Programming with MATLAB) or Computer Science 31 (Introduction to Computer Science I)		4	Technical Breadth Course*		4
Mathematics 33B (Differential Equations) or Mechanical and Aerospace Engineering 82 (Mathematics of Engineering)		4	May be subject to change. See counselor at 6426 BH to confirm		TOTAL
Mechanical and Aerospace Engineering 103 — Elementary Fluid Mechanics		4	<i>* Students should contact the Office of Academic and Student Affairs for approved lists in the categories of technical breadth and HSSEAS GE (see page 21 for details).</i>		181/182

† Must include required courses for two of the major field areas listed on page 49.