

BS in Civil Engineering & Sustainable Design – Sample Study Plan

Year 1 – Term 1 (Fall)

Course Type	Course Code	Course Title	ECTS
Compulsory	CESD 100	Introduction to Civil Engineering and Design	6
Compulsory	CESD 101	Engineering Drawings and 3D BIM	6
Compulsory	CSEN 101	Introduction to Programming	6
Compulsory (Gen Ed)	MATH 100	Calculus and Analytic Geometry III	6
Compulsory (Gen Ed)	ENGL 100	Academic English	6

Year 1 – Term 1 (Spring)

Course Type	Course Code	Course Title	ECTS
Compulsory	CESD 110	Introduction to Solid Mechanics	8
Compulsory	CESD 180	Engineered Systems and Sustainability	6
Compulsory (Science/Math)	MATH 101	Differential Equations	6
Compulsory (Science/Math)	PHYS 100	Introductory Physics	6
Compulsory (Science/Math)	PHYS 100L	Introductory Physics Lab	2
Gen Ed Elective		General Education Elective	6

Year 2 – Term 3 (Fall)

Course Type	Course Code	Course Title	ECTS
Compulsory	CESD 270	Remote Sensing and Digital Mapping	6
Compulsory	CESD 281	Sustainable Construction Materials & Technology	6
Compulsory (Science/Math)	CHEM 101	Introduction to Environmental Chemistry	6
Compulsory (Science/Math)	CHEM 101L	Introduction to Environmental Chemistry Lab	4
Compulsory (Science/Math)	STAT 101	Introduction to Probability and Random Variables	6
Gen Ed Elective		General Education Elective	6

Year 2 – Term 4 (Spring)

Course Type	Course Code	Course Title	ECTS
Compulsory	CESD 240	Fluid Mechanics and Hydraulics	6
Compulsory	CESD 211	Cornerstone Structural Analysis and Design	8
Compulsory (Science/Math)	CESD 271	Data Science for Engineers	6
Compulsory (Science/Math)	MATH 203	Numerical Computing	6
Compulsory (Gen Ed)	GEOL 227	Climate and Earth Sciences for Engineers	6

Year 3 – Term 5 (Fall)

Course Type	Course Code	Course Title	ECTS
Compulsory	CESD 360	Transportation Engineering & Design	6
Compulsory	CESD 312	Reinforced Concrete Design	6
Compulsory	CESD 330	Geotechnical Engineering & Design	6
Compulsory (Gen Ed)	BIOL 101	Human Biology	6
Compulsory (Gen Ed)	ENGL 102	Technical English	6

Year 3 – Term 6 (Spring)

Course Type	Course Code	Course Title	ECTS
Compulsory	CESD 313	Steel Design	6
Compulsory	CESD 320	Engineering Project Management & Economics	6
Compulsory	CESD 341	Engineering Hydrology	6
Compulsory (Gen Ed)	INDE 330	Engineering Ethics	6
Gen Ed Elective		General Education Elective	6

Year 3 – Term 7 (Summer)

Course Type	Course Code	Course Title	ECTS
Compulsory	CESD 400	Approved Experience	0

Year 4 – Term 8 (Fall)

Course Type	Course Code	Course Title	ECTS
Compulsory	CESD 450	Environmental Engineering & Design	6
Compulsory	CESD 417	Earthquake Engineering	6
CESD Elective		Engineering Elective	6
Gen Ed Elective		General Education Elective	6
Gen Ed Elective		General Education Elective	6

Year 4 – Term 9 (Spring)

Course Type	Course Code	Course Title	ECTS
Compulsory	CESD 482	Capstone Sustainability Project	6
CESD Elective		Engineering Elective	6
CESD Elective		Engineering Elective	6
Gen Ed Elective		General Education Elective	6