VANDERBILT
School *of* Engineering

Civil Engineering Curriculum (2024-2025 Catalog Year)
125 hours (minimum)

1. Mathematics (14 hours)

MATH 1300	Accelerated Single-Variable Calculus I (4 hours) F/S
MATH 1301	Accelerated Single-Variable Calculus II (4 hours) F/S
MATH 2300	Multivariable Calculus (3 hours) F/S
MATH 2420	Methods of Ordinary Differential Equations (3 hours) F/S

2. Basic Science (16 hours)

CHEM 1601+1601L	General Chemistry I and Laboratory (4 hours) F/S
PHYS 1601 +1601L	General Physics I and Laboratory (4 hours) F/S
PHYS 1602+1602L	General Physics II and Laboratory (4 hours) F/S
MSE 1500+1500L	Materials Science I (4 hours) S

3. Computing (3 hours)

CS 1100 **or** 1101 **or** 1103	Introductory Programming (3 hours) F/S

4. Engineering Fundamentals (26 hours)

ES 1401-1403	Introduction to Engineering (3 hours) F
CE 2101	Civil and Environmental Engineering Information Systems (3 hours) F
CE 2200	Statics (3 hours) F/S
CE 2205	Mechanics of Materials (3 hours) F/S
CE 2989	Numerical Methods in Civil & Environmental Engineering (3 hours) S
CE 3700+3700L	Fluid Mechanics and Laboratory (4 hours) F
ENGM 2160	Engineering Economy (3 hours) F/S
ME 2190	Dynamics (3 hours) F/S3700
MSE 2205	Strength and Structure of Engineering Materials (1 hour) F

5. Liberal Arts Core (18 hours)

6. Open Electives (6 hours)

Courses excluded from the listings in the Liberal Arts Core may be taken as open electives.

7. Technical Electives (3 hours)

8. Civil Engineering Core (27 hours)

CE 2120	Sustainable Design in Civil and Environmental Engineering (3 hours) F
CE 3100W	Civil and Environmental Engineering Laboratory (2 hours) S
CE 3200	Structural Analysis (3 hours) F
CE 3205	Structural Design (3 hours) S
CE 3300	Risk, Reliability, and Resilience Engineering (3 hour) S
CE 3501	Transportation Systems Engineering (3 hours) S
CE 3705	Water Resources Engineering (3 hours) S
CE 4400	Construction Project Management (3 hours) F
CE 4950	Civil Engineering Design I (1 hour) F
CE 4951	Civil Engineering Design II (2 hours) S
CE 4959	Senior Engineering Design Seminar (1 hour) F

9. Civil Engineering Program Electives (6 hours)

10. Civil Engineering Design Electives (6 hours)

Note: The VU Undergraduate Catalog is the definitive source for all degree requirements. If there are differences between this document and the catalog, then the catalog will prevail.

VANDERBILT
School *of* Engineering

Civil Engineering Prerequisites and Corequisites (2024-2025 Catalog Year)

1. Mathematics (14 hours)

MATH 1300	None.
MATH 1301	MATH 1300 or MATH 1201
MATH 2300	MATH 1301 or MATH 2200
MATH 2420	MATH 2300 or MATH 2310 or MATH 2501

2. Basic Science (12 hours)

CHEM 1601+1601L	None.
PHYS 1601 +1601L	Prerequisite or corequisite: MATH 1200 or MATH 1300
PHYS 1602+1602L	Prerequisite or corequisite: MATH 1201 or MATH 1301
MSE 1500+1500L	None.

3. Computing (3 hours)

CS 1100 **or** 1101 **or** 1103	None.

4. Engineering Fundamentals (26 hours)

ES 1401-1403	None.
CE 2101	None.
CE 2200	Corequisites: MATH 1301; PHYS 1601
CE 2205	CE 2200
CE 2989	CS 1100, 1101 or 1013; Corequisite: MATH 2420
CE 3700+3700L	ME 2190; MATH 2420
ENGM 2160	None.
ME 2190	CE 2200; PHYS 1601; Corequisite: MATH 2300
MSE 2205	Corequisite: CE 2205

5. Liberal Arts Core (18 hours)

6. Open Electives (6 hours)

Check individual course listings in the VU Undergraduate Catalog for requisites.

7. Technical Electives (3 hours)

Check individual course listings in the VU Undergraduate Catalog for requisites.

8. Civil Engineering Core (27 hours)

CE 2120	None.
CE 3100W	CE 2205
CE 3200	CE 2205
CE 3205	CE 3200
CE 3300	MATH 2300
CE 3501	None.
CE 3705	CE 3700 or CHBE 3300 or ME 3224
CE 4400	CE 3205
CE 4950	CE 3205
CE 4951	CE 4950
CE 4959	Senior Standing; Corequisite: 4950

9. Civil Engineering Program Electives (6 hours)

Check individual course listings in the VU Undergraduate Catalog for requisites.

10. Civil Engineering Design Electives (6 hours)

Check individual course listings in the VU Undergraduate Catalog for requisites.

Note: The VU Undergraduate Catalog is the definitive source for all degree requirements. If there are differences between this document and the catalog, then the catalog will prevail.