

Civil Engineering

FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
CHEM 105aL (GE E)* 4	GESM (GE B)# 4	PHYS 152L PHYS 151L, (MATH 226) 4	GEOL 305L 4	CE 408 (MATH 245) 2	DESIGN ELECTIVE 4	WRIT 340 WRIT 150 4	ISE 460 3
WRIT 150 4	GE C 4	GE D* 4	CE 108 2	CE 334L CE 225 or AME 204, CHEM 105aLg, or 115aLg, PHYS 152L 4	ENGINEERING ELECTIVE 3-4	DESIGN ELECTIVE 4	GE C 4
MATH 126 (GE F)* MATH 125 4	MATH 226 or MATH 229 MATH 126 or 129 4	MATH 245 MATH 226 or 229 4	GE A* 4	CE 358 CE 225 4	CE 451 CE 309 4	CE 471 MATH 226g or 227 or 229 4	CE 480 CE 408 and either CE 456, 457, 476 or 485 4
CE 106 2	PHYS 151L (GE E) MATH 125 or 126 or 226 4	CE 215 PHYS 151Lg 4	CE 225 CE 215 4	CE 456 CE 225 4	CE 467L CE 225 4	CE 453 CHEM 105aLg or 115aL, (CE 309) 4	CE ELECTIVE 2-4
ENGR 102 2	CE 107 2	CE 119 (MATH 245) 2	CE 309 MATH 226g or 229, (CE 225) 4	GE B 4	OPTIONAL ELECTIVE 2-3	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 3-5
OPTIONAL ELECTIVE 2							

MATHEMATICS (16 UNITS)

MATH 125: Calculus I*

MATH 126 or MATH 129: Calculus II*

MATH 226 or MATH 229: Calculus III

MATH 245: Mathematics of Phys. and Engr.

PHYSICS (8 UNITS)

PHYS 151L: Mechanics and Thermodynamics

PHYS 152L: Electricity and Magnetism

OTHER SCIENCE (8 UNITS)

CHEM 105aL: General Chemistry*

GEOL 305L: Intro. to Engineering Geology

GENERAL EDUCATION (32 UNITS)

GE A The Arts (1 Course)*

GE B Humanistic Inquiry (2 Courses)

GE C Social Analysis (2 Courses)

GE D Life Sciences (1 Course)*

GE E Physical Sciences (1 Course)*

GE F Quantitative Reasoning (1 Course)*

GE G,H Global Perspectives (2 Courses)*

GESM General Education Seminar (1 Course)

WRITING (8 UNITS)

WRIT 150: Writing and Critical Reasoning

WRIT 340: Advanced Writing

ENGINEERING (72-75 UNITS)

CE 106: Introduction to Civil Engineering

CE 107: Intro. To Civil Engineering Graphics

CE 108: Intro. to CE Computer Methods

CE 119: Probability Concepts and Civil Engineering

CE 215: Statics & Dynamics

CE 225: Mechanics of Deformable Bodies

CE 309: Fluid Mechanics

CE 334L: Mechanical Behavior of Materials

CE 358: Elementary Theory of Structures

CE 408: Risk & Decision Analysis in Civil Engr.

CE 451: Water Resources Engineering

CE 453: Water Quality Science & Engineering

CE 456: Structural Design I

CE 467L: Geotechnical Engineering

CE 471: Principles of Transportation Engr.

CE 480: Civil & Environmental Engr.
Capstone Design

ENGR 102: Engineering Freshman Academy

ISE 460: Engineering Economy

CE ELECTIVE

DESIGN ELECTIVES

ENGINEERING ELECTIVES

SPECIAL NOTES

Courses with the * symbol may be satisfied with AP, IB, or A-Level exams. See page 16 for more information.

GESM#: GESM can be taken from GE categories: A, B, C, or D. Courses listed in the guide are options for a four-year course plan.

GE: Engineering students are encouraged to satisfy GE G and GE H with a course that also satisfies a Core Literacy. GE H may be satisfied by AP/IB. Additionally, your GESM course should be taken in categories A, B, or C only. See page 15 for more information and consult your advisor for detailed assistance.

OPTIONAL ELECTIVES: Consult with your academic advisor to explore optional elective courses. These courses are not required.

CE 215, 225, AND 309: Minimum grade of "C" is required.

CIVIL ENGINEERING ELECTIVE: Choose at least two units of upperdivision CE coursework that is not already required.

DESIGN ELECTIVES: Choose eight units from CE 457, 465, 476, 482, or 485.

ENGINEERING ELECTIVE: Choose one course from AME 310 or EE 202L.

MATH 125: For students starting with Calculus 1, the engineering elective will be waived for your requirements.

Optional Course Tracks for **Civil & Environmental Engineering**

The Civil & Environmental Engineering (CEE) curriculum covers foundational concepts for the first several semesters. Students following the standard program will have the opportunity to take more technical electives, while students following one of the optional course tracks will take specific courses towards that specialization.

Construction

THIRD YEAR		FOURTH YEAR	
FALL	SPRING	FALL	SPRING
CE 408 (MATH 245) 2	DESIGN ELECTIVE 4	GE C 4	WRIT 340 WRIT 150 4
CE 334L CE 225 or AME 204, CHEM 105aLg, or 115aLg, PHYS 152L 4	ENGINEERING ELECTIVE 3-4	CE 482 CE 467L 4	ISE 460 3
CE 358 CE 225 4	CE 451 CE 309 4	CE 471 MATH 226g or 227 or 229 4	CE 480 CE 408 and either CE 456, 457, 476 or 485 4
CE 456 CE 225 4	CE 467L CE 225 4	CE 460 4	CE ELECTIVE 2-4
GE B 4	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2-5

Structural

THIRD YEAR		FOURTH YEAR	
FALL	SPRING	FALL	SPRING
CE 334L CE 225 or AME 204, CHEM 105aLg, or 115aLg, PHYS 152L 4	CE 457 CE 358L, CE 456 4	CE 471 MATH 226g or 227 or 229 4	CE 460 4
CE 358 CE 225 4	ENGINEERING ELECTIVE 3-4	CE 408 (MATH 245) 2	ISE 460 3
CE 456 CE 225 4	CE 458 CE 358L 4	CE 459 CE 458 2	GE B 4
GE C 4	CE 467L CE 225 4	WRIT 340 WRIT 150 4	CE 480 CE 408 and either CE 456, 457, 476 or 485 4
OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	CE 482 CE 467L 4	OPTIONAL ELECTIVE 3
		OPTIONAL ELECTIVE 2	

Water Resources

THIRD YEAR		FOURTH YEAR	
FALL	SPRING	FALL	SPRING
CE 408 (MATH 245) 2	CE 465 CE 453 4	CE ELECTIVE 4	ISE 460 3
CE 334L CE 225 or AME 204, CHEM 105aLg, or 115aLg, PHYS 152L 4	ENGINEERING ELECTIVE 3-4	CE 476 CE 309 4	GE C 4
CE 358 CE 225 4	CE 451 CE 309 4	CE 471 MATH 226g or 227 or 229 4	CE 480 CE 408 and either CE 456, 457, 476 or 485 4
CE 456 CE 225 4	CE 467L CE 225 4	GE B 4	WRIT 340 WRIT 150 4
CE 453 CHEM 105aLg or 115aLg, (CE 309) 4	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 3

Civil Engineering (Environmental)

FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
CHEM 105aL (GE E)* 4	GESM (GE B)# 4	ENE 215 PHYS 151Lg 4	CE 309 MATH 226g or 229, (CE 225) 4	GE C 4	CHE 330 (MATH 226g) 4	GE C 4	CE 480 CE 408, and either CE 456, 457, 476 or 485 4
WRIT 150 4	GE A* 4	MATH 245 MATH 226 or 229 4	ENE 200 CHEM 105aL, PHYS 151Lg, MATH 126g, (CHEM 105bL) 4	CE 408 (MATH 245) 2	CE 402 CE 108, MATH 245 2	CE 485 CE 453, CE 363L 4	ISE 460 3
MATH 126 (GE F)* MATH 125 4	MATH 226 or MATH 229 MATH 126 or 129 4	PHYS 152L PHYS 151L, (MATH 226) 4	CHEM 105bL CHEM 105aL 4	CE 358 CE 225 4	CE 467L CE 225 4	WRIT 340 WRIT 150 4	GE B 4
CE 110 2	PHYS 151L (GE E) MATH 125 or 126 or 226 4	CE 215 PHYS 151Lg 4	CE 225 CE 215 4	CE 456 CE 225 4	CE 451 CE 309 4	CE 410L BISC 220Lg, CHEM 105bL or 115bL 4	ENE 428 MATH 245, PHYS 151L, CHEM 105bL 4
ENGR 102 2	CE 108 2	CE 119 (MATH 245) 2	OPTIONAL ELECTIVE 2	BISC 220L (GE D)* 4	CE 363L ENE 200, CHEM 105bL or 115bL 4	OPTIONAL ELECTIVE 2	OPTIONAL ELECTIVE 3
OPTIONAL ELECTIVE 2							

MATHEMATICS (16 UNITS)

MATH 125: Calculus I*

MATH 126 or MATH 129: Calculus II*

MATH 226 or MATH 229: Calculus III

MATH 245: Mathematics of Phys. and Engr.

PHYSICS (8 UNITS)

PHYS 151L: Mechanics and Thermodynamics

PHYS 152L: Electricity and Magnetism

OTHER SCIENCE (12 UNITS)

CHEM 105aL: General Chemistry*

CHEM 105bL: General Chemistry

BISC 220L: Cell Biology and Physiology

GENERAL EDUCATION (32 UNITS)

GE A The Arts (1 Course)*

GE B Humanistic Inquiry (2 Courses)

GE C Social Analysis (2 Courses)

GE D Life Sciences (1 Course)*

GE E Physical Sciences (1 Course)*

GE F Quantitative Reasoning (1 Course)*

GE G,H Global Perspectives (2 Courses)*

GESM General Education Seminar (1 Course)

WRITING (8 UNITS)

WRIT 150: Writing and Critical Reasoning

WRIT 340: Advanced Writing

ENGINEERING (75 UNITS)

CE 108: Intro. to CE Computer Methods

CE 110: Intro. to Environmental Engineering

CE 119: Probability Concepts and Civil Engineering

CE 215: Statics & Dynamics

CE 225: Mechanics of Deformable Bodies

CE 309: Fluid Mechanics

CE 358: Elementary Theory of Structures

CE 363L: Water Chemistry and Analysis

CE 408: Risk & Decision Analysis in Civil Engr.

CE 410L: Introduction to Environmental Engineering Microbiology

CE 451: Water Resources Engineering

CE 467L: Geotechnical Engineering

CE 485: Wastewater Treatment Design

ENE 200: Environmental Engr. Principles

ENE 215: Energy Systems and Environmental Tradeoffs

ENE 428: Air Pollution Fundamentals

ENGR 102: Engineering Freshman Academy

ISE 460: Engineering Economy

SPECIAL NOTES

Courses with the * symbol may be satisfied with AP, IB or A-Level exams. See page 16 for more information.

GESM#: GESM can be taken from GE categories: A, B, C, or D. Courses listed in the guide are options for a four-year course plan.

GE: Engineering students are encouraged to satisfy GE G and GE H with a course that also satisfies a Core Literacy. GE H may be satisfied by AP/IB. Additionally, your GESM course should be taken in categories A, B, or D only. See page 15 for more information and consult your advisor for detailed assistance.

OPTIONAL ELECTIVES: Consult with your academic advisor to explore optional elective courses. These courses are not required.

CE 215, 225, AND 309: Minimum grade of "C" is required.

MATH 125: For students starting with Calculus 1, ISE 460 will be waived for your requirements.

Civil Engineering (Building Science)

FIRST YEAR		SECOND YEAR		THIRD YEAR		FOURTH YEAR	
FALL	SPRING	FALL	SPRING	FALL	SPRING	FALL	SPRING
CHEM 105aL (GE E)* 4	GESM (GE B)# 4	PHYS 152L PHYS 151, (MATH 226) 4	CE 309 MATH 226g or 229, (CE 225) 4	CE 119 (MATH 245) 2	CE 467L CE 225 4	CE 408 (MATH 245) 2	GEOL 305L 4
WRIT 150 4	GE C 4	ARCH 205aL CE 106 4	ARCH 205bL ARCH 205aL 4	ARCH 305aL ARCH 205bL 4	ARCH 305bL ARCH 305aL 4	ARCH 405aL ARCH 305bL 4	ARCH 405bL ARCH 405aL 4
MATH 126 or MATH 129* MATH 125 4	MATH 226 or MATH 229 MATH 126 or 129 4	MATH 245 MATH 226 or 229 4	GE B 4	CE 358 CE 225 4	CE 457 CE 358L, CE 456 4	WRIT 340 WRIT 150 4	GE C 4
CE 106 2	CE 108 2	ARCH 114 2	CE 225 CE 215 4	CE 456 CE 225 4	CE 458 CE 358L 4	CE 334L CE 225 or AME 204, CHEM 105aLg, or 115aLg, PHYS 152L 4	CE 460 4
ENGR 102 2	PHYS 151L (GE E) MATH 125 or 126 or 226 4	CE 215 PHYS 151Lg 4	GE A* 4	GE D* 4	OPTIONAL ELECTIVE 2	ARCH 214bg 3	OPTIONAL ELECTIVE 2
OPTIONAL ELECTIVE 2							

MATHEMATICS (16 UNITS)

MATH 125: Calculus I*
MATH 126 or MATH 129: Calculus II*
MATH 226 or MATH 229: Calculus III
MATH 245: Mathematics of Phys. and Engr.

PHYSICS (8 UNITS)

PHYS 151L: Mechanics and Thermodynamics
PHYS 152L: Electricity and Magnetism

OTHER SCIENCE (8 UNITS)

CHEM 105aL: General Chemistry*
GEOL 305L: Intro. to Engineering Geology

GENERAL EDUCATION (32 UNITS)

GE A The Arts (1 Course)*
GE B Humanistic Inquiry (2 Courses)
GE C Social Analysis (2 Courses)
GE D Life Sciences (1 Course)*
GE E Physical Sciences (1 Course)*
GE F Quantitative Reasoning (1 Course)*
GE G,H Global Perspectives (2 Courses)*
GESM General Education Seminar (1 Course)

WRITING (8 UNITS)

WRIT 150: Writing and Critical Reasoning
WRIT 340: Advanced Writing

ARCHITECTURE (29 UNITS)

ARCH 114: Architecture: Culture and Comm.
ARCH 214b: History of Architecture
ARCH 205aL: Building Science I
ARCH 205bL: Building Science I
ARCH 305aL: Building Science II
ARCH 305bL: Building Science II
ARCH 405aL: Building Science III
ARCH 405bL: Building Science III

ENGINEERING (46 UNITS)

CE 106: Introduction to Civil Engineering
CE 108: Intro. to CE Computer Methods
CE 119: Probability Concepts and Civil Engineering
CE 215: Statics & Dynamics
CE 225: Mechanics of Deformable Bodies
CE 309: Fluid Mechanics
CE 334L: Mechanical Behavior of Materials
CE 358: Elementary Theory of Structures
CE 408: Risk & Decision Analysis in Civil Engr.
CE 456: Structural Design I
CE 457: Structural Design II
CE 458: Computational Structural Analysis
CE 460: Construction Engineering
CE 467L: Geotechnical Engineering

SPECIAL NOTES

Courses with the * symbol may be satisfied with AP, IB, or A-Level exams. See page 16 for more information.

GESM#: GESM can be taken from GE categories: A, B, C, or D. Courses listed in the guide are options for a four-year course plan.

GE: Engineering students are encouraged to satisfy GE G and GE H with a course that also satisfies a Core Literacy. GE H may be satisfied by AP/IB. Additionally, your GESM course should be taken in categories A, B, C, or D only. See page 15 for more information and consult your advisor for detailed assistance.

OPTIONAL ELECTIVES: Consult with your academic advisor to explore optional elective courses. These courses are not required.

CE 215, 225, AND 309: Minimum grade of "C" is required.

ARCH 205ABL, ARCH 305ABL, AND ARCH 405ABL: Minimum grade of "C" is required in order to continue in the Building Science sequence.

MATH 125: For students starting with Calculus 1, GEOL 305L will be waived for your requirements.