

University core

Engineering Basics

Analysis + Design

PHYS 211X
Physics 1
Spring, Fall

MATH 251X
Calculus 1
Spring, Fall

CHEM 105X
Chemistry I
Spring, Fall

WRWG 111X
Writing Across Contexts
Spring, Fall

COJO 1X1X*
Oral Communication
Spring, Fall

General Education Requirements (GER)
18 credits
Spring, Fall

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|--|-----|
| Arts | 3 |
| Humanities | 3 |
| Social Science | 6 |
| Additional Arts, Humanities, or Social Science | 3** |
| Ethics | 3 |

**includes ANT requirement

PHYS 212X
Physics 2
Spring, Fall

MATH 252X
Calculus 2
Spring, Fall

CHEM 106X
Chemistry II
Spring, Fall

WRWG 21XX*
Academic Writing
Spring, Fall

LS 101
Library Info and Research
Spring, Fall

*choose from a suite of classes

CE 112
Elementary Surveying
Spring

MIN 202
Surveying and CAD for Engineers
Fall

MATH 253X
Calculus 3
Spring, Fall

MATH 302
Differential Equations
Spring, Fall

ES 100X
Engineering Alaska
Spring, Fall

DRT 210
Intermediate CAD
ADW

DRT 150
Civil Drafting
ADW

ES 201
Computer Techniques
Spring, Fall

ES 208
Mechanics
Spring, Fall

ES 341
Fluid Mechanics
Spring, Fall

ES 331
Mechanics of Materials
Spring, Fall

CE 334
Properties of Materials
Spring

GE 261
General Geology for Engineers
Spring

CE 302
Fundamentals of Transportation
Spring

CE 405
Design of Highways and Streets
Fall (even years)

CE 408
Transportation Safety Analysis
Fall (odd years)

CE 331
Structural Analysis
Spring

CE 433
Reinforced Concrete Design
Spring

CE 434
Timber Design
Fall (odd years)

CE 432
Steel Design
Fall

CE 451
Construction Cost Estim + Bid Prep
Fall

CE 344
Water Resources Engineering
Fall

CE 445
Hydrologic Analysis and Design
Spring

CE 420
Groundwater Engineering
Fall

CE 341
Environmental Engineering
Fall

CE 442
Water and Wastewater Treatment Design
Spring

ENVE 446
Biological Unit Processes
Spring (even years)

CE 326
Intro Geotechnical Engineering and Foundations
Fall

CE 422
Foundation Engineering
Fall (ADW)

CE 443
Air Pollution Management
Spring (odd years)

ES 301
Engineering Analysis
Spring, Fall

GE 440
Slope Stability
Fall (odd years)

GE 441
Geohazard Analysis
Fall (even years)

ESM 450+
Economic Analysis and Operations
Fall, Summer (ADW)

CE 424
Permafrost Engineering
Spring

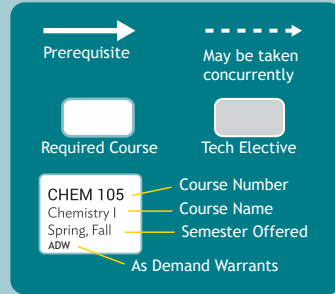
ME 441
Heat & Mass Transfer
Fall

CE 438***
Design of Engineered Systems
Spring

CE 401+
Arctic Engineering
Fall

*requires senior standing in CE

***Has other requirements. Consult with your CE advisor.



Please note: This is a flowchart, not a timeline!
Updated Aug 2023

Complete 9 technical elective credits. Must include 3 credits in the fields of environmental, construction or transportation, and 6 credits of CE, ENVE or ESM courses. Check with your CE advisor.

Transportation

Structural

Construction Management

Water Resources

Environmental

Geotechnical

Arctic