### BACHELOR OF SCIENCE IN CIVIL ENGINEERING (2023-2024 Catalog Year)

#### First Year: Fall
- **ES F100X** – Engineering Alaska 3
- **MATH F251X** – Calculus I 4
- **CHEM F105X** – General Chemistry 4
- **MIN F202 or CE F112** – Surveying 2 or 3
- **WRTG F111X** – Intro. to Acad. Writing 3

#### First Year: Spring
- **MATH F252X** – Calculus II 4
- **CHEM F106X** – General Chemistry 4
- **COJO F1X1X** – Oral Comm.* 3
- **WRTG F21XX** – Writing* 3
- **LS F101X** – Library Info. & Research 1

#### Second Year: Fall
- **MATH F253X** – Calculus III 4
- **PHYS F211X** – General Physics 4
- **DRT F210** – Intermediate CAD 3
- **ES F201** – Computer Techniques 3
- **GER A, H, SS, E (1 of 6)** 3

#### Second Year: Spring
- **MATH F302** – Differential Eqn. 3
- **PHYS F212X** – General Physics 4
- **ES F208** – Mechanics 4
- **ES F301** – Engineering Analysis 3
- **GE F261** – Gen’l Geology for Engr. 3

#### Third Year: Fall
- **ES F331** – Mechanics of Materials 3
- **CE F326** – Intro. to Geotech. & Fndts 4
- **ES F341** – Fluid Mechanics 4
- **CE F341** – Environmental Engr. 4

#### Third Year: Spring
- **CE F302** – Transportation Engr. 3
- **CE F331** – Structural Analysis 3
- **CE F334** – Properties of Materials 3
- **GER A, H, SS, E (2 of 6)** 3
- **GER A, H, SS, E (3 of 6)** 3

#### Fourth Year: Fall
- **CE F344** – Water Resources Engr. 3
- **CE F432** – Steel Design 3
- **ESM F450** – Economic Analysis & Ops. 3
- **GER A, H, SS, E (4 of 6)** 3
- **GER A, H, SS, E (5 of 6)** 3

#### Fourth Year: Spring
- **CE F438** – Design of Engr. Systems 3
- **Technical Elective** 3
- **GER A, H, SS, E (6 of 6)** 3

*Students may choose from a suite of courses to fulfill this requirement.

Students must take the Fundamentals of Engineering Exam in order to graduate.

**GER A, H, SS, E**: General Education Requirements – Arts, Humanities, Social Science, Ethics

**Technical electives**: 1) Complete 3 credits from the fields of environmental, construction, or transporation engineering; 2) Complete 6 credits from any of the following areas of emphasis, or as approved by an advisor:

**ARCTIC EMPHASIS**
- CE F401 Arctic Engineering
- CE F424 Permafrost Engineering
- ME F441 Heat and Mass Transfer

**CONSTRUCTION EMPHASIS**

**ENVIRONMENTAL EMPHASIS**
- CE F442 Water & Wastewater Trgmt. Design
- CE F443 Air Pollution Management
- ENVE F446 Biological Unit Processes

**GEOTECHNICAL EMPHASIS**
- CE F422 Foundation Engineering

**STRUCTURAL EMPHASIS**
- CE F433 Reinforced Concrete Design
- CE F434 Timber Design

**TRANSPORTATION EMPHASIS**
- CE F405 Design of Highways and Streets
- CE F407 Pavement Materials and Design
- CE F408 Transportation Safety Analysis

**WATER RESOURCES EMPHASIS**
- CE F445 Hydrologic Analysis and Design
- CE F420 Groundwater Engineering

Modified 08/21/2023
STUDENT NAME: _______________________

ID #: _____________________________

Students must earn a C- grade (1.7) or better in each course.

MAJOR REQUIREMENTS:
Complete the following program (major) requirements (includes courses indicated with § to the left):

CE F112 (3) _________ or MIN F202 (2) _________
CE F302 (3) _________
CE F326 (4) _________
CE F331 (3) _________
CE F334 (3) _________
CE F341 (4) _________
CE F344 (3) _________
CE F432 (3) _________
CE F438 (3) _________
DRT F210 (3) _________
ES F100 (3) _________
ES F201 (3) _________
ES F208 (4) _________
ES F301 (3) _________
ES F331 (3) _________
ES F341 (4) _________
ESM F450 (3) _________
GE F261 (3) _________

Technical electives:
Envir., Constr., Transp. _________ (3) _______

Two additional technical electives:
__________________________ (3) _______

Note: Up to two graduate-level engineering courses can serve as technical electives if approved by advisor; the student must be within two semesters of graduation and have at least a 3.0 GPA.

Must take the Fundamentals of Engineering Exam.
EXAM TAKEN: ________________

Total minimum credits required for degree: 125

* For a list of allowable classes, check the UAF catalog or speak with your advisor.