CAREER & TECHNICAL EDUCATION

PRE-ENGINEERING PROGRAM

CTE COURSE SEQUENCE

FOUNDATIONAL (9TH & 10TH)

- ☐ Technical Drafting 1 & 2 - **M**
- ☐ Principles of Engineering - **M**
- ☐ Introduction to Engineering Design - **M**

TECHNICAL (11TH & 12TH)

- ☐ Technical Drafting 3 & 4 - **M**
- ☐ Digital Electronics - **M**
- ☐ 3D Solid Modeling - **M**
- ☐ Civil Engineering & Architecture - **M**

ACADEMIC ELECTIVE CREDITS: S = SCIENCE **M** = MATH **LA** = LANGUAGE ARTS **SS** = SOCIAL STUDIES

ACADEMIC RIGOR

- ☐ Pre-Calculus with Trigonometry
- ☐ Chemistry
- ☐ Physics

STUDENT ORGANIZATION (CTSO)

- ☐ Skills USA

CERTIFICATION

- ☐ AutoCAD
- ☐ Inventor, Revit
- ☐ SolidWorks (CSWA)

EARLY COLLEGE CREDIT OPTIONS

COLLEGE CREDITS

DUAL ENROLLMENT

☐ Technical Drafting 1	1 cr
☐ Technical Drafting 2	1 cr
☐ Technical Drafting 3 & 4	3 cr

AP (WITH PASSING SCORE ON AP EXAM)

- ☐ AP Calculus
- ☐ AP Biology
- ☐ AP Chemistry
- ☐ AP Physics

MATANUSKA-SUSITNA BOROUGH SCHOOL DISTRICT

MAPPING YOUR 4-YEAR PLAN*

9TH GRADE | CREDITS

- ☐ Introduction to Engineering Design - **M** — 1 cr
- ☐ Algebra 1 — 1 cr
- ☐ English 1 — 1 cr
- ☐ Biology — 1 cr
- ☐ Civics — .5 cr
- ☐ Health — .5 cr
- ☐ PE — 1 cr

10TH GRADE | CREDITS

- ☐ Principles of Engineering - **M** — 1 cr
- ☐ Technical Drafting 1 - **M** — .5 cr
- ☐ Technical Drafting 2 - **M** — .5 cr
- ☐ Geometry — 1 cr
- ☐ English 2 — 1 cr
- ☐ Physical Science — 1 cr
- ☐ World History — 1 cr

11TH GRADE | CREDITS

- ☐ Digital Electronics
  OR 3-D Solid Modeling - **M** — 1 cr
- ☐ Technical Drafting 3 - **M** — .5 cr
- ☐ Technical Drafting 4 - **M** — .5 cr
- ☐ Algebra 2 — 1 cr
- ☐ English — 1 cr
- ☐ Science — 1 cr
- ☐ U.S. History — 1 cr

12TH GRADE | CREDITS

- ☐ Civil Engineering and Architecture - **M** — 1 cr
- ☐ Cooperative Work Experience — 1 cr
- ☐ Algebra 2 — 1 cr
- ☐ English — 1 cr
- ☐ Science — 1 cr
- ☐ U.S. History — 1 cr

*These are suggested courses to best prepare students for post-secondary transitions and credentialing. Actual courses may depend on school schedule availability and enrollment capacity. Some classes may be available at other locations through District-wide or course share options. Graduation requirements for number of credits and required courses are set at a district level and are subject to change. Talk to your counselor about your graduation requirements and to schedule your courses.

STACKABLE CREDENTIALS & DEGREES*

HIGH SCHOOL

- ☐ Dual Enrollment
- ☐ Academic AP

INDUSTRY CERTIFICATION

- ☐ AutoCAD
- ☐ SolidWorks (CSWA)
- ☐ Inventor, Revit

APPRENTICESHIP

- ☐ Trade Unions
- ☐ Private Entity

MILITARY

- ☐ U.S. Armed Forces

COLLEGE

- ☐ Associate of Applied Science in Construction Management
- ☐ Bachelor of Science in Construction Management
- ☐ Bachelor of Science in Engineering
  (Civil, Electrical, Mechanical, Chemical)

*Listed Certifications, Apprenticeships and College Degree Programs represent a SAMPLE of available credentials. Available credentials are subject to change due to industry and postsecondary institution changes.