

ENGINEERING, SCIENCES AND MATHEMATICS PATHWAY DIPLOMA

Graduation Requirements for a Diploma with an Emphasis in Engineering, Sciences and Mathematics Careers (If an AP Course is not offered at the time the student needs, the student may apply to take the equivalent class at a college under Concurrent Enrollment.)

English

4.0 Credits

Freshman English (1.0)
Contemporary Voices: Sophomore English or AP English Language (1.0)
Junior English or AP English Language or AP English Literature (1.0)
Senior English or AP English Literature (1.0), Senior Composition (1.0)

Mathematics

4.0 Credits

Geometry or Geometry Honors (1.0)
Algebra II or Algebra II Honors (1.0)
Precalculus or Precalculus Honors (1.0)
AP Calculus (1.0)

Science

5.0 Credits

EMPHASIS IN MATH AND SCIENCE

Conceptual Physics (.33)
Biology Concepts (.33)
Earth Systems (.33)
Introduction to Engineering (1.0)
AP Chemistry or AP Physics (1.0)
Additional 2.0 credits in science coursework as decided upon by parent, advisor, and student.

EMPHASIS IN ENGINEERING

Conceptual Physics (.33)
Biology Concepts (.33)
Earth Systems (.33)
Introduction to Engineering (1.0)
Physics (1.0)
AP Chemistry or AP Physics (1.0)
(AP Physics strongly recommended.)
Additional 1.0 credit in science coursework as decided upon by parent advisor and student.

Social Studies

3.33 Credits

Geography (.66) or AP Human Geography (1.0)
American Government (.33)
American History or AP American History (1.0)
World History or AP World History (1.0)
Economics (.33) or AP Economics (1.0) or High School of Business 1 – Principles of Business and Business Economics Honors (.66)

Fine Arts

1.0 Credit

At least one trimester (.33 credit) must be in visual arts.

Career and Technical Education

1.0 Credit

Computer Applications (.33)
Career Exploration (.33)

Additional .33 credit as decided upon by parent, advisor and student.

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World Language

2.0 Credits of the same language

Students may enroll in a language of their choice.
Students who plan to attend a four-year college should plan to take three years of the same language.

Wellness

1.0 Credit

Introduction to Health and Wellness (.33)
.33 additional credit in a P.E. class (The course catalog indicates if a class fulfills this requirement)
.33 additional credit in Wellness classes as decided upon by parent, advisor, and student.

Interdisciplinary

.66 Credit

Advising

2.4 Credit

Total Credits – The student must earn at least 29 credits for this pathway diploma.

Job Shadows – All students must complete 3 one-half day shadowing experiences. One experience must be in an *Engineering, Science, or Mathematics-related* field.

Community Service – 50 hours must be logged to receive .33 credit

Internship – 50 hours in an Engineering, Science, or Mathematics-related field must be logged to receive .33 credit

Pathway Exploration – Additional 50 hours in an Engineering-, Science-, or Mathematics-related field must be logged to receive .33 credit. This may be completed through additional shadowing, community service, or internship.

Portfolio – The ICAP portfolio is required for this pathway diploma

Senior Project – A senior project is required for this pathway diploma

Sample Careers for Engineering, Sciences, and Mathematics Pathway

- Aerospace Engineer
- Architect
- Atmospheric Science
- Bio Tech Engineering
- Chemist
- Civil Engineer
- Computer Engineer
- Electrical Engineer
- Mechanical Engineer
- Structural Engineer
- Systems Analyst
- Teacher of Science or Math

ENGINEERING, SCIENCES AND MATHEMATICS
PATHWAY DIPLOMA

Request for Pathway Diploma

Name: _____

Advisor: _____

This is to certify that the above-named student is committed to completing the graduation requirements for the Engineering, Sciences and Mathematics Pathway and is requesting the corresponding pathway diploma.

Student Signature _____

Date _____

Advisor Signature _____

Date _____

Turned into Student Services on _____ (must be during first trimester of senior year).

Received by _____

Revised 12/11/2019