

Bonny Eagle High School

STEM Program Guide

(2025-2026)

At Bonny Eagle High School we are committed to developing multiple opportunities for all students to excel in the areas of Science, Technology, Engineering and Math (STEM.) The following pathways are designed to help students develop skills, solve problems, and explore career opportunities in STEM fields. Individual students can also create their own pathway by combining components from the following three. Students are encouraged to discuss STEM options with their advisors and counselors when choosing their high school courses and creating a post-secondary plan.

STEM Diploma Pathway

Students who complete a rigorous course program that includes all four STEM disciplines will be awarded a STEM endorsed Bonny Eagle High School Diploma. To qualify for the endorsement, a student must successfully complete at least 4 credits each of math and science as well as 1.5 credits of T/E designated elective courses. **Half of the math and science credits must be at the AP or Honors level.**

Key: Bold = Honors Level

Italics: Offered as both Honors and non-honors

Science Course Options (Minimum of 4 Credits) ½ (2 credits) Honors or Higher Level required	Lab Earth Science & Honors Lab Earth Science , Lab Biology & Honors Lab Biology , Lab Chemistry, Honors Lab Chemistry , Lab Physics, Honors Lab Physics , AP Biology , AP Chemistry , AP Physics , AP Environmental Science , Aquatic Biology, Anatomy and Physiology, Astronomy (.5) Approved Early College Courses
STEM Designated Elective Course Options (Minimum of 1.5 Credits)	CAD/CAM, Computer Science, Construction, Electricity & Electronics Fundamentals of Programming, Homesteading Through Science, Materials Engineering Technology, Material Science, Power & Engines, Siege 101: (Sea, Land & Air), Survival Science, Systems & Autos,

	Tech in Action Vehicle Design Vex Robotics I, Vex Robotics II, Courses in Prior Courses: App Design, Power Technology, & Web Page Design Approved Early College Courses
Math Course Options (Minimum of 4 Credits) ½ (2 credits) Honors or Higher Level required	Algebra I, Honors Algebra I , Geometry, Honors Geometry , Honors Algebra II , PreCalculus , Trigonometry (.5), <i>Discrete Math: Applications</i> (.5), <i>Discrete Math: Structures</i> (.5), Calculus , Intro to Statistics (.5), Honors Probability & Statistics , AP Statistics , AP Calculus (2) Approved Early College Courses

**A student may appeal for administrator approval in times where scheduling prevents students from meeting certain credit requirements.*

STEM Courses and Dual Enrollment

Bonny Eagle High School, in conjunction with local community college partners, have several opportunities for students to explore careers in technical fields while earning dual enrollment college credit. Students can design an academic pathway that includes any combination of math, science, technology and engineering courses and include post-secondary experiences to fully round out the program.

Current Opportunities for Dual Enrollment in Math:

AP Calculus and Calculus: Up to 6 credits granted through the University of Southern Maine Project Aspire program. AP Statistics and Honors Probability & Statistics: 3 credits granted through the University of Southern Maine Project Aspire program.

Current Opportunities for Dual Enrollment, Articulation Agreements and National Certifications Through CTE Programs

**Programs that provide Integrated credit can be counted towards their content area. Courses that provide a certification in Math or Science may count as Honors level and are in Bold.*

Westbrook Regional Vocational Center STEM Field Programs	Portland Arts and Technology High School STEM Field Programs
Automotive Technology Computer Repair and Networking	Automotive Collision Technology Automotive Technology

Computer Science and Multimedia Electricity EMT/Firefighting Medical Occupations	Biomedical and Health Sciences Cybersecurity Marine Systems Plumbing and HVAC Welding Technology/Blacksmithing Basics
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Interested in Pre-engineering?

The STEM diploma can help you get there!

Bonny Eagle High School has a partnership agreement with the University of Maine where students who are accepted to the University of Maine can enter their Engineering Program with up to **36 credits**. The credits are awarded based on the successful completion of AP courses with scores of 3, 4 or 5 and university approval. This pathway also meets the requirements for a BEHS STEM Diploma.

Suggested Schedule

Grade 9 Pathway Courses	Honors English 9 Honors Global Village Honors Lab Earth Science Honors Math which could include: Hon Algebra II Hon Geometry AND Hon Algebra II 0.5 credit of T/E approved elective if possible 3-4 credits of other graduation requirements/electives including a world language
Grade 10 Courses	Honors English 10 Honors US History or AP US History Honors Lab Biology Honors Precalculus/Trigonometry 1.0 credit of T/E approved electives Other graduation requirements including a world language
Grade 11 Courses	AP English Language Honors Economics and Honors Government AP Calculus AB/BC* Honors Lab Chemistry *AP Physics .5 T/E Elective

Grade 12 Courses

T/E Elective

AP English Literature or Honors English 12

AP Physics* or AP Chemistry

AP Statistics or Statistics & Probability

Early College math class above Calculus 2

***AP Calculus A/C, B/C and AP Physics are required either junior or senior year.**