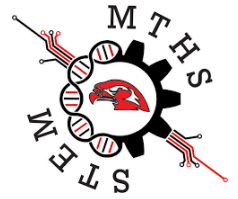




Mountlake Terrace STEM Program Honors Diploma Guide



The Mountlake Terrace STEM Program’s Honors Diploma is designed to offer an immersive four-year experience for students interested in a future career in STEM. Our Honors Diploma offers a two-year “Deep Dive” into one of three largest STEM fields in our region; Aerospace, Biotechnology, or Computer Science. In addition, students are asked to take four years of honors math, and 3 years of science. Finally, the whole experience is encapsulated by our foundations courses, where students apply their technical knowledge to original design and research projects. Once completed, students earn an Honors STEM Diploma, which represents a student who has advanced knowledge in a STEM field, who is well prepared to apply to competitive college programs, and has the academic background to succeed once admitted.

Directions

To receive a STEM Program Honors Diploma, students should begin their coursework with Introduction to Engineering Design, take 2.0cr of a STEM Deep Dive, 4.0cr of Math, follow the below science sequence, and finish with STEM English 12. If these credits are completed with a 70% (C-) or better, then you will earn a STEM Honors Diploma.

Foundations of STEM (2.0cr)	Deep Dive into STEM (2.0cr)	Math (4.0cr) (Take at MTHS)	Science (3.0-4.0cr) (Take at MTHS)														
<ul style="list-style-type: none"> Introduction to Engineering Design (1.0cr) Students learn the basics of Design, project management, communication and other skills necessary to function in the 21st century workplace 	<p>Students choose a sequence of STEM courses which build on each other to develop a depth of understanding in a high demand job field for this region.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; text-align: center;">Aerospace</td> <td> <ul style="list-style-type: none"> Principles of Engineering (1.0cr) Aerospace (1.0cr) </td> </tr> <tr> <td style="text-align: center;">Computer Science</td> <td> <ul style="list-style-type: none"> AP Computer Science Principles (1.0cr) AP Computer Science A (1.0cr) </td> </tr> <tr> <td style="text-align: center;">Biotechnology</td> <td> <ul style="list-style-type: none"> Biotechnology (1.0cr) AP Biology (1.0cr) </td> </tr> </table>	Aerospace	<ul style="list-style-type: none"> Principles of Engineering (1.0cr) Aerospace (1.0cr) 	Computer Science	<ul style="list-style-type: none"> AP Computer Science Principles (1.0cr) AP Computer Science A (1.0cr) 	Biotechnology	<ul style="list-style-type: none"> Biotechnology (1.0cr) AP Biology (1.0cr) 	<p>4.0cr total 3.0cr must be Honors/AP</p> <p>-Must include AP Calculus A-B or AP Statistics</p> <p>Courses include:</p> <ul style="list-style-type: none"> Honors Geometry (1.0cr) Honors Alg 2 (1.0cr) CHS Pre-Calculus (1.0cr) AP Calculus AB (1.0cr) AP Calculus BC (1.0cr) AP Statistics (1.0cr) 	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">9th</td> <td> <ul style="list-style-type: none"> Honors Biology (1.0cr) </td> </tr> <tr> <td style="text-align: center;">10th</td> <td> <ul style="list-style-type: none"> Chemistry (1.0cr) </td> </tr> <tr> <td style="text-align: center;">11th Or 12th</td> <td> <ul style="list-style-type: none"> AP Physics (1.0cr) AP Chemistry (1.0cr) AP Biology (1.0cr) <ul style="list-style-type: none"> AP Biology is only accepted for the CS pathway (AP Bio already required for Bio Deep Dive) </td> </tr> <tr> <td colspan="2" style="text-align: center;"> <p>*Only Students who take the Biotechnology Deep Dive may use Anatomy and Physiology as their 11th-12th grade science.</p> </td> </tr> </table>	9 th	<ul style="list-style-type: none"> Honors Biology (1.0cr) 	10 th	<ul style="list-style-type: none"> Chemistry (1.0cr) 	11 th Or 12 th	<ul style="list-style-type: none"> AP Physics (1.0cr) AP Chemistry (1.0cr) AP Biology (1.0cr) <ul style="list-style-type: none"> AP Biology is only accepted for the CS pathway (AP Bio already required for Bio Deep Dive) 	<p>*Only Students who take the Biotechnology Deep Dive may use Anatomy and Physiology as their 11th-12th grade science.</p>	
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<ul style="list-style-type: none"> STEM English 12 (1.0cr) Students spend the year proposing, developing, and presenting a capstone project for the International Science and Engineering Fair 																	

Fair and the Central Sound Science and Engineering Fair. Students also have the opportunity to be members of, or compete, in Career and Technical Student Organizations (CTSO clubs). Many STEM students show excellence in depth areas leading to acceptance into their first choice schools. These classes and extracurricular activities build research skills, organization, professionalism, connection, teamwork, leadership, community involvement, and competition at the regional and national levels.

College Credit Offering: Students have the opportunity to earn college credit through CHS, CTE, and AP testing

College in the High School (CHS)

Introduction to Engineering Design (Edmonds CC)

Pre-Calculus

Calculus

Career and Technical Education (CTE) (dual credit in college and high school)

Biotechnology (5cr. Shoreline CC)

Anatomy and Physiology (5.0cr Edmonds CC)

Principles of Engineering (3.0cr LWTech)

Advanced Placement (AP) (credit available with AP test)

AP Physics

AP Biology

AP Chemistry

AP Calculus

AP Computer Science Principles

AP Computer Science A

AP Statistics

CTSO and STEM Club Opportunities for Acknowledgement: Several CTSO clubs have had regional and state competitors as well as national qualifiers.

VEX Robotics: Regional, State and National competitions

FIRST Robotics: Regional, State and National competitions

Technology Student Association (TSA): State and National Competition and MTHS is the largest TSA chapter in Washington State

HOSA Future Health Professionals: State and National Competition

Team America Rocketry Challenge: National Competition and Rocketry Certifications

International Science and Engineering Fair: Regional and State competitions

E-Sports: State and National Competition

STEM + Music

Students often complete 4 years of Music courses at the same time as the STEM Diploma. Although common, this typically requires students to waive 1.0cr Physical Education, and then take an additional .5cr Physical Ed and .5Cr Personal Finance Online. Students should work with their counselor to make these arrangements.