

Computer Science & Engineering Pathway (STEM Honors Diploma)



The Computer Science and Engineering program of study introduces students to rewarding field of computer software development. Students develop software development skills using programming methods emphasizing problem solving and algorithm development. This program is an excellent option for students interested in pursuing Computer Science or Engineering in college.

Required Courses for STEM Honors Diploma – Computer Science/ Engineering Pathway

Course	Credits	College Credits Available
Honors Geometry	1.0	
Honors Biology	1.0	
Honors Algebra 2	1.0	
Chemistry	1.0	
Physics or AP Physics	1.0	
Honors Pre-Calculus	1.0	
AP Calculus or AP Statistics	1.0	Advanced Placement Credit
Intro to Engineering Design	1.0	Lake WA Institute of Tech (5)
Computer Science Principles or AP CSP	1.0	UW (5), AP Credit Available
AP Computer Science A	1.0	UW (4), AP Credit Available
English 12 STEM Engineering	1.0	

Program Spotlight

Students in this program have opportunity to compete in skill challenges through the FIRST Robotics club and competitions.

The job demand for skilled Computer Science and Engineering workers continues to be extremely high.

Sample High School and Bevond Plans for MTHS STEM Honors Diploma Students

The following are sample college-preparatory STEM Honors Diploma schedules for Music and Non-Music students pursuing the Computer Science and Engineering program of study. These plans are designed to serve as helpful starting guides for students in their planning for high school and beyond. Required STEM Honors Diploma courses are listed in red *italics*.

Gra nglish 9/English 9 Honors lonors Geometry lonors Biology /orld Hist. 9/Honors WH 9 lusic	de 9 English 9/English 9 Honors Honors Geometry Honors Biology	Grac English 9/English 9 Honors	de 9 English 9/English 9 Honors	
lonors Geometry lonors Biology /orld Hist. 9/Honors WH 9	Honors Geometry	<u> </u>	English 9/English 9 Honors	
lonors Geometry lonors Biology /orld Hist. 9/Honors WH 9	Honors Geometry	<u> </u>		
/orld Hist. 9/Honors WH 9		Honors Geometry	Honors Geometry	
/orld Hist. 9/Honors WH 9		Honors Biology	Honors Biology	
	Health	World Hist. 9/Honors WH 9	Health	
	Music	World Language	World Language	
ntro to Engineering Design	Intro to Engineering Design	Intro to Engineering Design	Intro to Engineering Design	
		Grade 10		
nalish 10/Eng10 Honors	English 10/Eng10 Honors	English 10/Eng10 Honors	English 10/Eng10 Honors	
3			World Hist. 10/AP Euro Hist.	
			Honors Algebra 2	
	u	-	Chemistry	
			World Language	
			English 11/AP Eng. 11	
			US History	
5	- ,	- ,	Honors Pre-Calculus	
			PE	
0 0	0 0		World Language/Elective	
			AP Computer Science A	
			English 12 STEM Engineering	
			Social Studies 12	
			Art Elective	
	5 5		AP Calculus or AP Statistics	
			Physics or AP Physics	
			Elective	
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		-		
Edmonds Community College (EdCC)				
		 Robotics and Electronics (Associate Degree) 		
 Computer Science (Tran 	ister Degree)	 Computer Science (Tran 	ister Degree)	
University of Washington, Washington State University:		University of Washington, Wa	shington State University:	
 Computer Science & Engineering (BA/ MA Degrees) 		 Computer Science & Engineering (BA/ MA Degrees) 		
		Rochester Institute of Techno	alogy (RIT)	
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scnool program for college cree	ait.	nigh school program for colle	ge creait.	
	Grad nglish 10/Eng10 Honors Vorld Hist. 10/AP Euro Hist. Vorld Hist. 10/AP Euro Hist. Vorld Lange Computer Science Grad nglish 11/AP Eng. 11 S History Vorld Language lusic P Computer Science A Grad nglish 12 STEM Engineering ocial Studies 12 Vorld Language lusic P Calculus or AP Statistics hysics or AP Physics Regional 2 and 4-Year Co dmonds Community College • Robotics and Electronics • Computer Science & En- ochester Institute of Technology Indicates college programs which	Grade 10 Inglish 10/Eng10 Honors English 10/Eng10 Honors Iorid Hist. 10/AP Euro Hist. World Hist. 10/AP Euro Hist. Ionors Algebra 2 Honors Algebra 2 hemistry Chemistry Iusic Music Computer Science Principles or AP CSP Grade 11 Inglish 11/AP Eng. 11 English 11/AP Eng. 11 S History US History Ionors Pre-Calculus Honors Pre-Calculus /orld Language World Language Iusic Music P Computer Science A AP Computer Science A Grade 12 Music nglish 12 STEM Engineering English 12 STEM Engineering ocial Studies 12 Social Studies 12 /orld Language World Language Iusic Music P Calculus or AP Statistics AP Calculus or AP Statistics hysics or AP Physics Physics or AP Physics Regional 2 and 4-Year College/University Programs dmonds Community College (EdCC) • Robotics and Electronics (Associate Degree) • Computer Science (Transfer Degree) niversity of Washington, Washington State University:	Grade 10Inglish 10/Eng10 HonorsGradInglish 10/Eng10 HonorsEnglish 10/Eng10 HonorsIord Hist. 10/AP Euro Hist.World Hist. 10/AP Euro Hist.Iorons Algebra 2Honors Algebra 2hemistryChemistryIusicMusicComputer Science Principles or AP CSPChemistryIusicGrade 11Inglish 11/AP Eng. 11English 11/AP Eng. 11S HistoryUS HistoryJorors Pre-CalculusHonors Pre-CalculusMorld LanguageWorld LanguageIusicMusicP Computer Science AAP Computer Science AGrade 12GradInglish 12 STEM EngineeringEnglish 12 STEM EngineeringJorid LanguageWorld LanguageIusicMusicP Calculus or AP StatisticsAP Calculus or AP StatisticsP Calculus or AP StatisticsAP Calculus or AP StatisticsPhysics or AP PhysicsPhysics or AP PhysicsElectiveRegional 2 and 4-Year College/University Programsdmonds Community College (EdCC)• Computer Science (Transfer Degree)• Computer Science & Englineering (BA/ MA Degrees)• Computer Science & Englineering Technology (RIT):• Engineering Technology (BA degree) *• Indicates college programs which articulate directly with this	

Note: STEM Honors Diploma Music students will still need to complete .5 PE and .5 Personal Finance through alternative means such as Running Start, summer school, eLearning, or BYU online.



Computer Science and Engineering Pathway (STEM Diploma)



The Computer Science and Engineering program of study introduces students to rewarding field of computer software development. Students develop software development skills using programming methods emphasizing problem solving and algorithm development. This program is an excellent option for students interested in pursuing Computer Science or Engineering in college.

Required Courses for STEM Diploma – Computer Science & Engineering Pathway

Course	Credits	College Credits Available
Algebra 1	1.0	
Geometry	1.0	
Biology	1.0	
Algebra 2	1.0	
Chemistry	1.0	
Physics	1.0	
Pre-Calculus	1.0	
Robotics	.5	
Computer Science Foundations	.5	
Intro to Engineering Design	1.0	Lake WA Institute of Tech (5)
Computer Science Principles (CSP) or AP CSP	1.0	UW (5), AP Credit Available
AP Computer Science A	1.0	UW (4), AP Credit Available
English 12 STEM Engineering	1.0	

Program Spotlight

Students in this program have opportunity to compete in skill challenges through the FIRST Robotics club and competitions.

The job demand for skilled Computer Science & Engineering workers continues to be extremely high.

Sample High School and Bevond Plans for MTHS STEM Diploma Students

The following are sample STEM Diploma schedules for students who wish to pursue the Computer Science and Engineering program of study. These plans are designed to serve as helpful starting guides for students in their planning for high school and beyond. Required STEM Diploma courses are listed in red *italics*.

District Graduation Requirements	"I Plan to Enroll in a Community/Technical College"		
2017-2020	Grade 9		
English 4.0	English 9/English 9 Honors	English 9/English 9 Honors	Eng
Math 3.0	Algebra 1	Algebra 1	Alg
Science 2.0	Biology	Biology	Biol
Social Studies 3.5 Health .5	World Hist. 9/Honors WH 9		Wo
P.E. 1.5	Art Elective	Art Elective V	Wo
Art 1.0	Robotics	CS Foundations F	Rot
Personal Finance .5	Gra	de 10	
Career/Technical 1.5 Electives 4.5	English 10/Eng10 Honors	English 10/Eng10 Honors E	Eng
Electives 4.5	World Hist, 10/AP Euro Hist,		Nor
Total Credits 22	Geometry		Geo
	Chemistry		Che
	Elective		Wo
	Intro to Engineering Design	Intro to Engineering Design	Intro
District Graduation Requirements 2021	Grade 11		
& Beyond:	English 11/AP Eng. 11	English 11/AP Eng. 11 E	Eng
Additional credit of	US History	<u> </u>	Soc
Science and additional	Algebra 2	Algebra 2	Alge
credit of Electives required.	Physics		Phy
	PE		Art
Total Credits 24	Computer Science Principles or AP CSP		
		de 12	
Graduation and	English 12 STEM Engineering	English 12 STEM Engineering E	Engl
Minimum	Social Studies 12	Social Studies 12	Soc
4-Year College/University	Personal Finance	Elective	ΡE
Entrance	Pre-Calculus	Pre-Calculus F	Pre
Requirements:	AP Computer Science A	AP Computer Science A	AP
English 4.0	Elective		Eleo
Math 3.0	Regional Community/Te	chnical College Programs	
Science (Lab) 2.0 Social Studies 3.5			Uni
Health .5	Edmonds Community College (EdCC) Robotics and Electronics (Associate Degree) * 		
P.E. 1.5	 Robolics and Electronics (Associate Degree) Computer Science (Transfer Degree) 		
Art 1.0 Personal Finance .5	 Windows/C++ Specialization (Certificate) 		
Personal Finance .5 Career/Technical 1.5	 Computer Game Development (Certificate) 		
Electives 2.0			•
World Language 2.0			
Sr. Math/Science 1.0	* Indicates college programs which articulate directly with this high school program for college credit.		
Total Credits 22	control program for college the		

"I Plan to Enroll in a 4-Year College/University"			
Grade 9			
English 9/English 9 Honors	English 9/English 9 Honors		
Algebra 1	Algebra 1		
Biology	Biology		
World Hist. 9/Honors WH 9	Health		
World Language	World Language		
Robotics	CS Foundations		
Grad	le 10		
English 10/Eng10 Honors	English 10/Eng10 Honors		
World Hist. 10/AP Euro Hist.	World Hist. 10/AP Euro Hist.		
Geometry	Geometry		
Chemistry	Chemistry		
World Language	World Language		
Intro to Engineering Design	Intro to Engineering Design		
Grade 11			
English 11/AP Eng. 11	English 11/AP Eng. 11		
Social Studies 11	Social Studies 11		
Algebra 2	Algebra 2		
Physics	Physics		
Art Elective	Art Elective		
Computer Science	Principles or AP CSP		
	le 12		
English 12 STEM Engineering	English 12 STEM Engineering		
Social Studies 12	Social Studies 12		
PE	Personal Finance		
Pre-Calculus	Pre-Calculus		
AP Computer Science A	AP Computer Science A		
Elective	Elective		
Regional 4-Year College/University Programs			
University of Washington, Wa	ashington State University		
Multiple Private colleges:			
 Computer Science & Engineering (BA/ MA Degrees) 			
Rochester Institute of Technology (RIT):			
 Engineering Technology (BA degree) * 			
* Indicates college programs which articulate directly with this high school program for college credit.			

Note: STEM Students will still need to complete .5 PE and .5 Personal Finance. This may need to be done through alternative means such as Running Start, summer school, eLearning, or BYU