STEM



Within the requirements of the 26 credits to earn an endorsement, including Algebra II, chemistry, and physics, a student must complete one of the following course areas below to meet the STEM endorsement criteria.



Career and Technical Education (CTE)

A coherent sequence of courses for four or more credits in CTE that includes at least two courses in the same career cluster in *Table 1*, including at least one advanced CTE course (designated with A); and the final course in the sequence from the CTE career cluster courses from *Table 2*.

Table 1		
Agriculture, Food, and Natural Resources		Law, F
Principles of Agriculture, Food, Natural Resources 9-10 Veterinary Medical Applications A 11-12 Landscape Design & Management 9-12 Turf Grass Management 9-12 Agricultural Mechanics & Metal Technologies A 11-12 Floral Design II (Advanced Floral Design) A 12	1 .5 .5 .1	Manu Weldir Science
Practicum in Agriculture: Vet Med Assistant A 12 Architecture & Construction	1	Honor Honor
Architectural Design I A 11-12 Architectural Design II A 12	1 2	Gatew
Health Science Principles of Health Science 9-10 Medical Terminology A 9-12 Pharmacology A 12 World Health Research A 11-12 Health Science Theory A 10-11 Practicum in Health Science I A 11-12	1 1 1 1 1 2	Engine Aerosp Digital Engine Engine
Practicum in Health Science II A 12 Anatomy & Physiology A 11-12 Hospitality & Tourism Food Science A 11-12	2 1	Autom Autom Collisio
Information Technology Internetworking Technologies I-Cisco A 11-12 Internetworking Technologies II-Cisco A 12	1 1	Paint a

Law, Public Safety, Corrections & Security	
Forensic Science A 11-12	1
Manufacturing	
Welding I A 12	2
Science, Technology, Engineering, & Mathematics	
Engineering Design & Presentation I A 11-12	1
Honors Scientific Research & Design A 10-12	1
Honors Scientific Research & Design II A 11-12	1
Honors Scientific Research & Design III A 11-12	1
Gateway to Technology PLTW 8 (high school elective credit)	.5
Introduction to Engineering Design PLTW 9-10	1
Engineering Science PLTW A 10-12	1
Aerospace Engineering PLTW A 11-12	1
Digital Electronics PLTW A 11-12	1
Engineering Design and Development PLTW A 12	1
Engineering Design & Problem Solving A 12	1
Transportation, Distribution & Logistics	
Automotive Technology I: Maintenance & Light Repair 11-12	2
Automotive Technology II: Automotive Service A 12	2
Collision Repair 11-12	2
Paint and Refinishing A 12	2

Table 2	
Science, Technology, Engineering, & Mathematics	
Engineering Design & Presentation I A 11-12	1
Honors Scientific Research & Design A 10-12	1
Honors Scientific Research & Design II A 11-12	1
Honors Scientific Research & Design III A 11-12	1
Engineering Science PLTW A 10-12 (formerly POE)	1
Digital Electronics PLTW A 11-12	1
Engineering Design & Problem Solving A 12	1

Career Preparation I or II A 11-12 with Extended Career Prep (if the course addresses a career from a field listed among the career clusters in this table)	3
Project-Based Research A 11-12 (if the course addresses a career from a field listed among the career clusters in this table)	1

A - Advanced

Science Credit

Math Credit

Meets Health Graduation Requirements

Computer Science

A coherent sequence of four credits in computer science selected from the following:

Computer Science I; Computer Science II; Computer Science III;

AP Computer Science; AP Computer Science Principles; IB Computer Science SL or HL;

Game Programming and Design



Math

Three credits in mathematics including Algebra II and two additional math courses for which Algebra II is a prerequisite (for a total of 5 math credits)

	Credit 1	Credit 2	Credit 3	Credit 4		Credit 5
	Algebra I	Geometry	Algebra II	Precalculus or Precalculus Honors		
				 AQR MIS AP Computer Science AP Calculus AB (must be taken after Precalculus) AP Calculus BC (must be taken after Precalculus) AP Statistics (must be taken after or concurrently with Precalculus) 		
	-or-	-or-	-or-			
	Algebra I Honors	Geometry Honors	Algebra II Honors			
	Algebra I Honors	Geometry Honors	Algebra II IH	Precalculus IH	Math HL Year I (BC Calculus)	Math HL Year 2
IBHL	Algebra I IH	Geometry IH				
	Algebra I Honors	Geometry Honors	Algebra II	Precalculus	Math SL	
IBSL	-or-	-or-	-or-	-or-		
	IH	IH	Algebra II IH	Precalculus IH		

^{*}if in the IB program, must also satisfy requirements of the IB diploma



Four credits in science, including chemistry, physics, and two additional science courses (for a total of 5 science credits)

Credit 1	Credit 2	Credit 3	Credit 4	Credit 5	
Biology	Chemistry	Physics or Physics PreAP, and any two courses selected from: • Anatomy and Physiology			
-or-	-or-	 AP Biology (1.5 AP Biology + 0.5 Honors Research & Design) AP Chemistry (1.5 AP Chemistry + 0.5 Honors Research & Design) 			
Biology PreAP	Chemistry PreAP	 AP Physics 1/2 AP Physics C Engineering Design and Problem Solving Environmental Systems AP Environmental Science Honors Scientific Research and Design Food Science Forensic Science Engineering Science (PLTW) 			
Biology IH	Chemistry IH	Physics, IB Physics S		courses selected from—	
		-or- Physics Pre-AP	IB Chem	gy SL	

E Combination

In addition to Algebra II, chemistry, and physics, a coherent sequence of three additional credits from no more than two of the categories above.

It is the policy of Plano ISD not to discriminate on the basis of race, color, national origin, gender, or handicap in its programs, services, or activities, including vocational programs. Lack of English language skills will not be a barrier to admission and participation in all educational and vocational programs. Plano ISD will take steps to ensure cost will not prevent access to programs.

All courses may not be offered on every campus. Check with campus counseling department for more information.

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