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.

A 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***, and
- At least one advanced CTE course (designated with **A**), and
- The final course in the sequence from the CTE career cluster courses in ***Table 2***.

Table 1

Agriculture, Food and Natural Resources	
Principles of Agriculture, Food, Natural Resources 9-10	1
Veterinary Medical Applications **A** 11-12	1
Landscape Design & Management 9-12	.5
Turf Grass Management 9-12	.5
Agricultural Mechanics & Metal Technologies 11-12	1
Agricultural Structures Design and Fabrication **A** 12	2
Advanced Floral Design **A** 12	1
Practicum in Agriculture, Food, Natural Resources **A** 12	2
Architecture and Construction	
Architectural Design I 11-12	1
Architectural Design II **A** 12	2
Health Science	
Principles of Health Science 9-10	1
Medical Terminology 9-12	1
Pharmacology **A** 12	1
World Health Research **A** 11-12	1
Health Science Theory **A** 10-11	1
Practicum in Health Science I **A** 11-12	2
Practicum in Health Science II **A** 12	2
Anatomy & Physiology **A** 11-12	1
Hospitality and Tourism	
Food Science **A** 11-12	1
Information Technology	
Internetworking Technologies I-Cisco 11-12	1
Internetworking Technologies II-Cisco **A** 12	1

Law and Public Service	
Forensic Science **A** 11-12	1
Science, Technology, Engineering and 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 and Logistics	
Automotive Technology I: Maintenance & Light Repair **A** 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 and 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

B 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

C 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 *-or-* Algebra I Honors	Geometry *-or-* Geometry Honors	Algebra II *-or-* Algebra II Honors	• 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)		
IBHL	Algebra I Honors *-or-* Algebra I IH	Geometry Honors *-or-* Geometry IH	Algebra II IH	Precalculus IH	Math HL Year I (BC Calculus)	Math HL Year 2
IBSL	Algebra I Honors *-or-* IH	Geometry Honors *-or-* IH	Algebra II *-or-* Algebra II IH	Precalculus *-or-* Precalculus IH	Math SL	

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

D

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 *-or-* Biology Honors	Chemistry *-or-* Chemistry Honors	**Physics or Physics Honors**, and any two courses selected from: • Anatomy and Physiology • AP Biology (1.5 AP Biology + 0.5 Honors Research & Design) • AP Chemistry (1.5 AP Chemistry + 0.5 Honors Research & Design) • 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)		
IB	Biology IH	Chemistry IH	Physics, IB Physics SL *-or-* Physics Honors	Any two courses selected from— IB Physics HL IB Biology SL IB Biology HL IB Chemistry SL IB Chemistry HL Environmental Systems 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.

February 2020