

**Cluster: Education & Training Pathway: Teaching and Training: STEM**

This Career Pathway Plan of Study serves as a guide, along with other graduation and career planning materials. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals. \*This Plan of Study meets the ACPS requirements for high school graduation with the Advanced Technical Diploma as well as general college entrance requirements.

EDUCATION LEVELS	GRADE	English/ Language Arts	Mathematics	Science	Social Studies/ Science	Other Required Courses Recommended Electives Learner Activities	Recommended Career and Technical Courses Source: Administrative Planning Guide www.doe.virginia.gov/VDOE/ Instruction/CTE/apg/	SAMPLE – Occupations Relating to This Pathway: www.doe.virginia.gov/VDOE/ Instruction/CTE/careerclusters/ www.careerclusters.org www.cteresource.org/cpg/	
<b>Graduation Requirements: <a href="http://www.doe.virginia.gov/2plus4in2004/index.shtml">http://www.doe.virginia.gov/2plus4in2004/index.shtml</a></b>									
<b>MIDDLE</b>	7	English 7 (1110)	Math 7 (3111)	Life Science (4115)	U S History (2354)	Health, PE, Family Life (7120)	Inventions and Innovations (8482)	Teacher Clinical Counseling School Psychologists Child, Family, & School Social Workers, Educational & School Counselors Speech-Language Pathologists Child Life Specialist Recreation Workers College Professor School Administrator Superintendent Education Consultant Curriculum Specialist	
	8	English 8 (1120)	Math 8 (3121) or Algebra I (3130)	Physical Science (4125)	Civics & Economics (2357)	Health, PE, Family Life (7200)	Technological Systems (8463)		
<b>Career Assessment:</b> Administration of a career assessment instruments appropriate at the middle school level to help students and their parents plan for high school and beyond.									
<b>SECONDARY</b>	9	English 9 (1130)	Algebra I (3130) or Geometry (3143)	Biology (4310)	World History/ Geography I (2215)	Economics & Personal Finance (6120) Health & PE (2 years) Foreign Language (3 years) Other Electives to Complement Pathway (Core Academic and CTE)	Engineering Explorations I (8450)		
	10	English 10 (1140)	Geometry (3143) or Algebra II (3135)	Earth Sciences (4210)	World History/ Geography II (2216) or AP World (2380)		Engineering Analysis & Applications II (8451)		
	11	English 11 (1150) or AP Language (1196) or DE College Composition (1601)	Algebra II (3135) or Pre-Calculus (3162)	Chemistry (4410)	US/VA History (2360) or DE US History or AP US History (2319)		DE Teachers for Tomorrow I (9062)		
	12	English 12 (1160) or AP Literature (1195) or DE World Literature (1602)	Pre-Calculus (3162) or AP Calculus BC (3177)	Advanced Science* (DE Physics)	US/VA Government(2440) or AP Government (2445)		DE Teachers for Tomorrow II (9072)		
High school courses in the pathway offered locally for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit) * Indicates courses with optional AP sections, students must take at least one AP or college-level course to earn the Advanced Diploma									
<b>List related certifications/credentials approved by VDOE and offered locally:</b> <a href="http://www.doe.virginia.gov/VDOE/Instruction/CTE/apg/">http://www.doe.virginia.gov/VDOE/Instruction/CTE/apg/</a> (Go to Section 9.) NOCTI CDA International Certificate Praxis I (Para Pro)						<b>Additional Learning Opportunities:</b> CTSO Organization(s): <input checked="" type="checkbox"/> Future Educator's Rising <input checked="" type="checkbox"/> TSA <input type="checkbox"/> DECA <input type="checkbox"/> FBLA <input type="checkbox"/> FFA <input type="checkbox"/> FCCL <input type="checkbox"/> HOSA <input type="checkbox"/> SkillsUSA <b>Work-Based Learning:</b> <input checked="" type="checkbox"/> Job Shadowing <input checked="" type="checkbox"/> Externship <input checked="" type="checkbox"/> Internship <input checked="" type="checkbox"/> Mentorship <input checked="" type="checkbox"/> Service Learning <input type="checkbox"/> Apprenticeship <input type="checkbox"/> SAE <input type="checkbox"/> Entrepreneurship <input type="checkbox"/> Youth Registered Apprenticeship <input type="checkbox"/> Cooperative Education <input type="checkbox"/> Clinical <input type="checkbox"/> School-Based Enterprise			
<b>Postsecondary:</b> Placement Assessments such as Virginia Placement Test, Accuplacer						College Entrance Exams such as ACT & SAT			
<b>POSTSECONDARY</b>	<b>SAMPLE POSTSECONDARY PROGRAMS RELATED TO THIS CAREER PATHWAY</b>								
	<b>Pathway</b>	<b>Associate Degree, College Certificate, or Apprenticeship</b>			<b>Bachelors Degree</b>		<b>Postgraduate Degree</b>		
	Teaching and Training: STEM	Social Sciences: Teacher Education Specialization, A.S.			Elementary Education, BS, Secondary Education, BS		Education, MEd (PreK-6, Secondary, STEM, Special Education, EL)		

Community College: [Northern Virginia Community College](http://www.northernvirginia.edu)

School Division(s): [Alexandria City Public Schools](http://www.alexandriapublicschools.org)

POSTSECONDARY - COMMUNITY COLLEGE or APPRENTICESHIP - Determined Locally	Semester	English/Speech	Mathematics	Science	Social Studies	Humanities	Required Courses or Recommended Electives			
	<b>POSTSECONDARY PLAN OF STUDIES MUST INCLUDE POSTSECONDARY ACADEMIC, CTE, AND OTHER ELECTIVE COURSES APPROPRIATE FOR AN ASSOCIATE DEGREE.</b>									
	Year 1 1 <sup>st</sup> Semester	ENG 111 College Composition 1	MTH 161 Pre-Calculus I <b>OR</b> MTH 167 Pre- Calculus with Trigonometry	BIO 101 General Biology I <b>OR</b> GOL 105 Physical Geology <b>OR</b> GOL 106 Historical Geology				EDU 207 Human Growth and Development <b>OR</b> PSY 230 Development Psychology	SDV 101 Elective Orientation to Teaching <b>OR</b> SDV 100 College Success Skills	
	Year 1 2 <sup>nd</sup> Semester	ENG 112 College Composition II	MTH 245 Statistics	Physical or Life Science with Lab	HIS 121 United States History I			EDU 280 Technology Standards for Teachers		
	Year 2 1 <sup>st</sup> Semester	ENG 250 Children's Literature <b>OR</b> Any Literature Elective			HIS 122 United States History II	GEO 210 People and the Land: An Introduction to Cultural Geography <b>OR</b> GEO 220 World Regional Geography	EDU 200, Introduction to Teaching as a Profession	CST 100 Principles of Public Speaking <b>OR</b> CST 110 Introduction to Communication		
Year 2 2 <sup>nd</sup> Semester				HIS 101 History of Western Civilization I <b>OR</b> HIS 102 History of Western Civilization II	Humanities/Fine Arts Elective	EDU 254 Teaching Basic Academic Skills to Exceptional Children <b>OR</b> EDU 250 Foundations of Exceptional Education	PLS 135 American National Politics <b>OR</b> PLS 136 State & Local Politics	STEM-specific Elective		

**College courses offered locally in the high school for college credit should be coded: DE (Dual Enrollment) and/or VC (Validated Credit)**

**Related Industry Certifications Available:**

Praxis I

**Additional Suggested Learning Opportunities:**

**Work-Based Learning:**

- Cooperative Education   
  Internship   
  Mentorship  
 Job Shadowing   
  Service Learning Project   
  Registered Apprenticeship

**UNIVERSITY**

**University/College:** George Mason University or Virginia State University

**Degree or Major:** BS Elementary Pre K-6 or Secondary 6-12 Education

**Number of Articulated CC Credits:** Minimum of 60 credits

**Notes:**

The Social Sciences: Teacher Education Specialization, A.S. degree is designed for students who are interested in a traditional Teacher License required to teach in a public school.

Upon completion of this program, students can substitute teach and/or transfer credits to an Elementary or Secondary Education Degree program for a BS degree.