



## Pathway: Management and Administration/STEM

### Plan of Study: Information Technology

**Career Goal (O\*Net Code):** 115-1099.04 Web Developers; 15-1081.00 Network Systems and Data Communications Analysts; 15-1071.00 Network and Computer Systems Administrators; 15-1021.00 Computer Programmers; 15-1041.00 Computer Support Specialists

#### Suggested High School Courses

<b>High School</b> * Default includes CDHE Higher Education Admission Requirements	9 <sup>th</sup>	<b>Core Academic Courses*:</b>	English 9, World Civilizations, Intro to Geography, Algebra I, Introduction to Physical Science, Integrated Science	<b>Suggested Electives:</b> Arapahoe Douglas Career and Technical School. <a href="http://www.actinfo.org">www.actinfo.org</a>
		<b>Career Path Courses:</b>	*Business Technology 1/ *Desktop Publishing/ Career Connections/Tech Studies 1	
	10 <sup>th</sup>	<b>Core Academic Courses*:</b>	English 10, US History (Electives: Anthropology, World Geography), Geometry or Algebra 11 Biology, Astronomy (Elective) Foreign Language I	<b>Suggested Electives:</b> *Accounting 1,2,3,4 Business Communications Business Law Business Math Business Writing
		<b>Career Path Courses:</b>	*Advanced Business Technology 2/ *Integrated Bus Tech 3/ Career Connections/Tech Studies 2/ Web Page Design 1/, Graphic Design	
	11 <sup>th</sup>	<b>Core Academic Courses*:</b>	English Elective (American Literature, Journalism, Creative Writing, Drama/Debate, etc.), Western Civilization or AP European History (Electives: AP Human Geography, Anthropology, Colorado History, World Religions, Film History, Intro to Law, Russian History, Sociology, World Geography, or Psychology), Algebra II, Probability and Statistics or Pre-Calculus, Chemistry, (Electives: Astronomy, Zoology, Plant Science, Genetics or Meteorology)	<b>Suggested Electives:</b> *Business Technology *Advanced Business Technology *Integrated Business Technology
		<b>Career Path Courses:</b>	*Integrated Business Technology 3/ *Web Page Design 1 or 2/ Professional Employment Training/Tech Studies 3, Advanced Graphic Design	
	12 <sup>th</sup>	<b>Core Academic Courses*:</b>	English Literature, World Literature, Government, Economics/Civics (Electives: AP Human Geography, Anthropology, Colorado History, World Religions, Film History, Intro. to Law, Russian History, Sociology, World Geography or Psychology), Trigonometry, Pre-Calculus, Probability and Statistics, Calculus or AP Statistics Physics, (Electives: Astronomy, Zoology, Plant Science, Genetics or Meteorology)	<b>Suggested Electives:</b> International Business *Business Principles *Personal Finance *Web Page Design *Word Proc/Desktop Publishing *Marketing *Advanced Marketing Entrepreneurship Sports and Entertainment Marketing
		<b>Career Path Courses:</b>	Any above classes/ Tech Studies 4/ Business Elective (see list of suggested electives); Academic Internship/ Community Employment Experience/ PET	

#### Secondary to Postsecondary Linkages & Certifications

<b>Recognition for Advanced Learning</b>	<b>Postsecondary Credit Options:</b> Articulated Credit (see *'s above for classes that articulate and attached articulation agreement), ACP (Advanced Credit Pathway), PSEO (Post Secondary Enrollment Options - 11 <sup>th</sup> and 12 <sup>th</sup> grade, up to two classes/semester for 2 years),
	<b>Industry Recognized Certificate(s) or License(s):</b> Microsoft Certifications - <a href="http://www.microsoft.com/learning/mcp/certifications.aspx">http://www.microsoft.com/learning/mcp/certifications.aspx</a> ; MOS Cisco (CCNA) - <a href="http://www.cisco.com/web/learning/le3/learning_career_certifications_and_learning_paths_home.html">http://www.cisco.com/web/learning/le3/learning_career_certifications_and_learning_paths_home.html</a> Project Management (PMP) - <a href="http://www.pmi.org/CareerDevelopment/Pages/Certification-and-the-Job-Market.aspx">http://www.pmi.org/CareerDevelopment/Pages/Certification-and-the-Job-Market.aspx</a> Network+Security+Microsoft MCSA/MCSE, CWNA, CWSP A+Network+ Security+ - Computer Technician - Comp TIAA+

		Postsecondary Programs Available in Colorado	Colorado Institutions	Entrance Exams/ Requirements
<b>Postsecondary Certificate</b>	IComputer Aided Drafting - 2D, 3D, Custom Computer Information Systems Networking Certificates (UNIX, CISCO, Microsoft Certified, Networking Security), Computer Technician Microsoft Certified System Engineer Computer Graphics, Web-Based Design/Marketing		Arapahoe Community College Community College of Denver Red Rocks Community College Westwood College	CPT/Accuplacer  Varies by course

<b>Associate Degree</b>	Computer Information Systems (AAS) with various options Computer Network Technology(AAS) Computer Science(AAS) Computer Support Professional(AAS) Business Administration(AAS) AA Business Transfer Emphasis AAS Multimedia/Graphic Design and Illustration Information Sciences/Studies	Aimes Community College Arapahoe Community College Northwestern Community College Community College of Aurora Community College of Denver Front Range Community College ITT Technical Institute Metropolitan State College of Denver Pikes Peak Community College Red Rocks Community College Westwood	High School Diploma/GED CPT/Accuplacer  IGeneral Ed Entrance and Course requirements Emphasis Requirements
<b>Bachelor Degree</b>	Computer Information Systems/Security Computer Science Computer Systems Analysis/Analyst Computer Information Sciences and Support Systems	Airforce Academy Colorado Mountain College Colorado School of Mines Colorado State University DeVry University University of Colorado University of Colorado at C. Springs University of Colorado at Denver University of Denver	High School Diploma ACT/SAT Requirements for an Associate Degree plus additional requirements
<b>Graduate Degree</b>	Computer Science Computer and Information Science Information Science and Studies	Colorado School of Mines, Colorado State University, Regis University University of Colorado at Boulder University of Colorado Health Sciences Center	GRE  IBachelor Degree

**Cluster Overview:** The **Information Technology Career Cluster** prepares students for Entry Level, Technical, and Professional Careers Related to the Design, Development, Support and Management of Hardware, Software, Multimedia, and Systems Integration Services.

#### Extended Learning Experiences

<b>Curricular Experiences:</b> DECA - (events in organizations that apply)	<b>Extracurricular Experiences:</b> FBLA, TSA, FCCLA, Business Expos, Career Fairs, MUSE, Model United Nations Student Council/Student Government, Key Club
<b>Work-Based Learning Experiences:</b>  Career Preparation – Paid and Unpaid, Job Shadowing, Internships, Community Employment Experience, Informational Interviews and Academic Internship (available through Advisory Committee).	<b>Program Accreditation and/or Professional Association(s):</b>  Professional Business Leaders - (FBLA-PBL.org, Independent Computer Consultants Association, Association for Women in Computing Institute for Certification of Commuting Professionals, Computer Technology Industry Association, Society for Information Management IEEE Computer Society
<b>Service Learning Experiences:</b> See above - Volunteer tech support skills to community	

<b>Career Options:</b>		<b>Salary Range:</b>
<b>Certificate</b>	Computer Programmers - C++, Java, etc. Telecommunications Equipment - Installer and Repairer Computer Equipment Repairer, Electrical/Electronics Repairer Office Administrative Support Specialist, Desktop Publisher	\$\$
<b>Associate Degree</b>	Computer Programmers, Graphic Designers, Desktop Publisher,	\$\$-\$\$\$
<b>Bachelor Degree</b>	Computer Programmers Computer Science Computer Systems Analysts Computer and Information Systems Manager Network Systems/Data Communications Analyst Graphic Designers	\$\$\$ - \$\$\$\$
<b>Graduate Degree</b>	Computer Science Computer Systems Analysts Computer and Information Systems Manager	\$\$\$ - \$\$\$\$

\* \$ = \$15-25,000; \$\$ = \$25-55,000; \$\$\$ = \$55-90,000; \$\$\$\$ = Above \$90,000

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