


HIGH SCHOOL: Capital High School		BIG SKY PATHWAY PROPOSAL 
COLLEGE: Helena College University of Montana		
COLLEGE DEGREE PROGRAM: Computer Technology AAS Network Administration Option		
Cluster Overview: Information Technology careers encompass entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services.	Pathway Options: <ul style="list-style-type: none"> • Network Systems • Information Support and Services • Web and Digital Communications • Programming and Software Development 	Occupation Examples: Animator, Database Administrator, Data Systems Designer, E-Business Specialist, Game Developer, Information Technology Engineer Media Specialist, Network Administrator, Network Security Analyst, PC Support Specialist, Programmer, Software Applications Specialist, Systems Administrator, Telecommunications Network Technician, User Support Specialist, Virtual Reality Specialist, Web Architect/Designer <i>For a complete listing, go to:</i> http://online.onetcenter.org/find/career?c=11&q=Go

SUGGESTED HIGH SCHOOL COURSES

9th	Graduation Requirements Workforce/2-Year College Prep	English I; Math; Earth Science; Social Studies; Physical Ed	Recommended CTE Cluster Foundation Course(s): Computer Tech Skills Microsoft Word and Microsoft Excel
	4-Year MT College/Univ Prep (Rigorous Core)	English I, Algebra I, Math I or II Honors, Earth Science, World Cultures, Phys Ed, Foreign Language	
	CTE and/or Electives	Computer Tech Skills	
10th	Graduation Requirements Workforce/2-Year College Prep	English II; Math II; Biology; Health; Fine Art	Recommended CTE Pathway Courses: Computer Science, Intro to Programming (CSCI 110)
	4-Year MT College/Univ Prep (Rigorous Core)	Geometry, Math II Honors, or Pre-Calc, Biology, Health, Foreign Language	
	CTE and/or Electives	Computer Science / Intro to Robotics	
11th	Graduation Requirements Workforce/2-Year College Prep	English III; M111 Technical Math; US History	Other Recommended CTE Courses: CNC Machining, Graphic Web Design, Robotics
	4-Year MT College/Univ Prep (Rigorous Core)	English III, College Algebra (M121), American History, Chemistry I or Bio 2, Foreign Language	
	CTE and/or Electives	CAPP 154 Microsoft Word; CAPP156 Microsoft Excel	
12th	Graduation Requirements Workforce/2-Year College Prep	WRIT121T Technical Writing or WRIT101 College Writing and English IV; US Government	Career & Technical Student Organization(s): Helena Robotics, Business Professionals of America
	4-Year MT College/Univ Prep (Rigorous Core)	English IV (1 semester) and College Writing (WRIT101), American Government, Calculus, Chemistry II or Physics, Foreign Language	
	CTE and/or Electives	Intro to Programming (CSCI 110), Graphic Web Design, Sociology, Psychology	

ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

Advanced Placement or IB courses: AP U.S. History; AP Am. Government; AP English Literature, AP English Language, AP European History, AP Spanish
Dual Enrollment courses: M111T Technical Mathematics; WRIT121T Technical Writing; WRIT 101 College Writing; LIT110 Intro to Lit; COMX111 Intro To Public Speaking; M121 College Algebra; M151 Pre-Calculus; M171 Calculus, STAT216 Intro to Statistics; MCH234 CNC Milling Operations 1; ACCT 101 Accounting, CAPP154 Microsoft Word, CAPP156 Microsoft Excel; <i>Under Construction for 2015-16 CSCI 110 Intro to Programming</i>
Online courses: MTDA: M121 College Algebra; WRIT101 College Writing; CSCI107 Joy & Beauty of Computing
Other: Robotics Competition; Science Olympiad; Opportunities for Evening Courses at Helena College

POSTSECONDARY PROGRAM OF STUDY

	Math	English	Major	Other
Semester 1 (16 CR)	M111 Technical Math /or M115 Linear Mathematics 3CR	WRIT101 College Writing /or WRIT121T Technical Writing 3CR	CSCI100 Intro to Programming 3CR OR CSCI107 Joy & Beauty of Computing 3CR BMIS285 Fundmntls of Managemt Information Systems 3CR NTS104 CCNA 1: Intro to Networks 4CR	

Semester 2 (16 CR)			NTS105 CCNA 2: Routing & Switching 3CR MART145 Web Design 3CR ITS224 Intro to Linux 3 CR ITS280 Comp. Repair & Maintenance. 4CR	SOCI101 Intro to Sociology /or PSYX100 Intro to Psychology /or HR110T Career Development and Human Relations 3CR
Semester 3 (15 CR)			NTS205 CCNA 4:Connecting Networks 3CR CSCI221 Syst. Analysis & Des. 4CR CSCI240 Databases & SQL 3CR ITS255 Telephony 3CR	ITS-- Intro to Administrative Scripting Microsoft Window 2CR ITS—Intro to Admin Scripting for Platform Integration 2CR
Semester 4 (18 CR)			CSCI212 Web Server Admin 3CR ITS212 Network Operating System Server Admin 4CR ITS218 Network Security 3CR NTS204 CCNA 3 Scaling and Networks 3CR	CSCI298 Internship OR CSCI299 Thesis/Capstone 2CR...

MONTANA POSTSECONDARY OPPORTUNITIES

Montana University System Degree and Program Inventory: <http://www.homepage.montana.edu/~mus/drginv/>
Your Guide to Montana's Certificate and Associate Degree Programs: <http://mus.edu/twoyear/YourGuide.html>

MSU Two Year Colleges and Programs: City College MSUB—Billings (CC); Great Falls College MSU—Great Falls (GFC); Helena College UM—Helena (HC) Highlands College MT Tech—Butte(HC-Tech); Missoula College UM—Missoula (MC); Gallatin College MSU—Bozeman(GC)	Community Colleges: Dawson Community College (DCC) Flathead Valley Community College (FVCC) Miles Community College (MCC)	Tribal Colleges: Aaniiih Nakoda College (ANC);Blackfeet Community College(BCC); Chief Dull Knife College (CDKC);Fort Peck Community College (FPCC);Little Big Horn College (LBHC);Stone Child College (SCC);Salish Kootenai College (SKC)	Four Year Colleges/Universities: MSU—Bozeman; MSUB—Billings; MSUN—Havre; MT Tech—Butte; UM—Missoula; UMW—Dillon
MILITARY	<ul style="list-style-type: none"> Requires diploma or GED 17 with parental consent; 18 without 	Air Force, Air Guard, Army, Coast Guard, Marines, and Navy For more information: http://todaysmilitary.com	
PROFESSIONAL CERTIFICATE	<ul style="list-style-type: none"> Requires diploma or GED Less than 30 credits; little/no general ed credits Complete in one year or less 		
APPRENTICESHIP	<ul style="list-style-type: none"> Requires diploma or GED Must be at least 18 Minimum 2,000 hours of supervised experience 	See the MT Dept of Labor website for more information: http://wsd.dli.mt.gov/apprenticeship/default.asp	
CERTIFICATE OF APPLIED SCIENCE	<ul style="list-style-type: none"> Requires diploma or GED 30-45 credits; limited general education credits Complete in one year or less 	Computer Assistant — HC, HC Tech, GFC Computer Desktop/Network Support — FPCC Computer Networking — CC, HC Tech, GFC, UMW Computer Science/Technology — BCC Computer Skills Specialist — HC Computer Support — MC Programming Technology — FPCC Web Technology/Development/Design — DCC	
ASSOCIATE'S OF APPLIED SCIENCE DEGREE	<ul style="list-style-type: none"> Requires diploma or GED 60-72 credits; includes 15-25 general ed credits Complete in two years (if prepared academically in math and English) 	Computer Desktop/Network Support — CC, SKC Computer Graphics — MCC Computer Information Systems — MC, MSUN, Computer Networking — HC, MC, HC Tech, GFC, MCC, FPCC Computer Science/Technology — FPCC, BCC Computer Systems Tech — CC Computer Technical Support Specialist — DCC Information Technology/Systems — FVCC Microcomputer Specialist/Technology — GFC Programming Technology — HC, CC Web Technology/Dev/Design —HC Tech, GFC, FVCC	
BACCALAUREATE DEGREE	<ul style="list-style-type: none"> Requires 4-year college prep for admission 128 credits (approximately) Complete in four years 	Computer Engineering — MSU, SKC Network Technology — TECH Computer Science — MSU, UM Computer Info Systems — MSUN Information Systems — UM Information Technology — SKC	