



<p><b>Cluster Overview:</b> Jobs in the Science, Technology, Engineering and Mathematics career cluster involve planning, managing, and providing scientific research and professional technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.</p>	<p><b>Pathway Options:</b></p> <ul style="list-style-type: none"> <li>• Engineering and Technology</li> <li>• Science and Math</li> </ul>	<p><b>Occupation Examples:</b> Engineers (all), Chemist, Astrophysicist, Botanist, Geologist, Mathematician, Physicist, Economist, Lab Tech, Scientist, Statistician</p>
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## SUGGESTED HIGH SCHOOL COURSES

Based on State Graduation Requirements and Montana College Admissions Criteria: <http://mus.edu/admissions.asp>  
For more information, talk to your school counselor

<b>9<sup>th</sup></b>	Graduation Requirements 2-Year College Prep	English, Math, Earth Science (lab science), Health Enhancement	<p><b>Cluster Foundation Courses:</b> Information Technology</p> <p><b>Pathway Courses:</b> Calculus Chemistry Economics Introduction to Engineering Design Physics Principles of Engineering Statistics</p> <p><b>Student Organization(s):</b> BPA DECA SkillsUSA</p>
	4-Year MT College/Univ Prep (Rigorous Core)	English, Algebra I, Earth (lab) Science, Health Enhancement and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	<b>Career-Related Electives</b>	<b>Cluster Foundation Courses</b>	
<b>10<sup>th</sup></b>	Graduation Requirements 2-Year College Prep	English, Math, Biology (lab science), Global Studies	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Geometry, Biology, Global Studies, and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	<b>Career-Related Electives</b>	<b>Cluster/Pathway Courses</b>	
<b>11<sup>th</sup></b>	Graduation Requirements 2-Year College Prep	English, U.S. History, Visual/Performing Arts	
	4-Year MT College/Univ Prep (Rigorous Core)	English, U.S. History, Algebra II, Chemistry or Physics and 3 years of the following: World Language/Computer Science/Visual or Performing Arts/Career & Tech Ed	
	<b>Career-Related Electives</b>	<b>Pathway Courses</b>	
<b>12<sup>th</sup></b>	Graduation Requirements 2-Year College Prep	English, Government	
	4-Year MT College/Univ Prep (Rigorous Core)	English, Government, Social Studies, College Prep Writing, (additional math encouraged), and 3 years of the following: World Language/Computer Science/ Visual or Performing Arts/Career & Tech Ed	
	<b>Career-Related Electives</b>	<b>Pathway Courses</b>	

## ADVANCED LEARNING OPPORTUNITIES High School to College/Career Linkages

Tech Prep courses:
Advanced Placement courses:
Running Start opportunities:
Work-based Learning:
On-line Learning:

## MONTANA POSTSECONDARY OPPORTUNITIES

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

<b>Colleges of Technology:</b> BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula	<b>Community Colleges:</b> DCC—Glendive; FVCC—KalisPELL; MCC—Miles City	<b>Tribal Colleges:</b> BFCC—Browning; CDKC—Lame Deer; FBCC—Harlem; FPCC—Poplar; LBHC—Crow Agency; SCC—Box Elder; SKC—Pablo	<b>Four Year Colleges/Universities:</b> MSU—Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UM— Missoula; UMW—Dillon
<b>MILITARY</b>	<ul style="list-style-type: none"> <li>Requires diploma or GED</li> <li>17 with parental consent; 18 without</li> </ul>	Air Force, Air Guard, Army, Coast Guard, Marines, Navy For more information: <a href="http://todaysmilitary.com">http://todaysmilitary.com</a>	
<b>PROFESSIONAL CERTIFICATE</b>	<ul style="list-style-type: none"> <li>Requires diploma or GED</li> <li>Less than 30 credits; little/no general ed credits</li> <li>Complete in one year or less</li> </ul>		
<b>APPRENTICESHIP</b>	<ul style="list-style-type: none"> <li>Requires diploma or GED</li> <li>Must be at least 18</li> <li>Minimum 2,000 hours of supervised experience</li> </ul>	See the MT Dept of Labor website for more information:  <a href="http://wsd.dli.mt.gov/apprenticeship/default.asp">http://wsd.dli.mt.gov/apprenticeship/default.asp</a>	
<b>CERTIFICATE OF APPLIED SCIENCE</b>	<ul style="list-style-type: none"> <li>Requires diploma or GED</li> <li>30-45 credits; limited general education credits</li> <li>Complete in one year or less</li> </ul>		
<b>ASSOCIATE'S OF APPLIED SCIENCE DEGREE</b>	<ul style="list-style-type: none"> <li>Requires diploma or GED</li> <li>60-72 credits; includes 15-25 general ed credits</li> <li>Complete in two years (<i>if prepared academically in math and English</i>)</li> </ul>		
<b>BACCALAUREATE DEGREE</b>	<ul style="list-style-type: none"> <li>Requires 4-year college prep for admission</li> <li>128 credits (approximately)</li> <li>Complete in four years</li> </ul>	Astronomy—UM Chemistry—MSU, U M, TECH, MSUB Chemical Engineering—MSU Civil Engineering—MSU, TECH Computer Engineering—MSU Economics—MSU, UM Electrical Engineering—MSU, TECH Environmental Engineering—TECH Geology/Earth Science—UM, MSU Geoscience—UM Industrial Engineering—MSU Mathematical Sciences—TECH Mechanical Engineering—MSU, TECH Medical Technology—UM Metallurgical Engineering—TECH Microbiology/Medical Lab Science—MSU Petroleum Engineering—TECH Physics—MSU, UM Software Engineering—TECH	