

## Integrating the Montana Career Information System (MCIS) with *Big Sky Pathways*

**Montana Career Information System (MCIS)**, a tool for career exploration funded by the Student Assistance Foundation and housed in the Department of Labor and Industry, has developed a content-rich, highly engaging website for career and educational planning. With its emphasis on career planning through self-assessment, career information, portfolio-building, and postsecondary planning, MCIS has the potential to enhance secondary instruction and postsecondary advising. Moreover, MCIS has the capacity to play an important role in the development, implementation, and ultimate success of Big Sky Pathways.

Like all projects aligned with the Career Clusters Initiative, Programs of Study provisions of Perkins IV, Big Sky Pathways are envisioned as a way to achieve a new vision for CTE by

- Consistently and thoroughly connecting secondary and postsecondary education in a non-duplicative sequence, requiring integration of rigorous academic and technical instruction, and encouraging the acquisition of dual credit.
- Providing a roadmap for students to navigate educational options and prepare them to successfully transition into postsecondary education, careers, and lifelong learning.
- Serving as a tool for collaboration between the learner levels and a framework for curriculum revision and alignment.

Historically, Montana secondary and postsecondary programs have been developed independently. The concept of a statewide single program of study for a career pathway is either impossible to construct, incomplete, or so generic that it is not a beneficial planning tool for students, parents, teachers, or counselors. Integrating the roadmaps provided through Big Sky Pathways with the career exploration tools provided by MCIS allows local flexibility within the framework of state-level information. That in turn gives students, teachers, parents, and counselors the clarity they need to lay out a secondary-postsecondary pathway and to adjust it as needed.

By capitalizing on the resources of MCIS, students will be able to create their own Big Sky Pathway MAP (Montana Achievement Plan) for an entire CTE Program of Study including information on tech prep articulation and other dual credit opportunities.

The following pages outline how the partnership of OPI, MCIS, and OCHE demonstrates Montana's commitment to excellence by providing students with a tool that will help them transition to their career goal.

## From self discovery to career plan using MCIS ....

1. **Self Assessment**--MCIS provides a number of free assessment tools which help students identify one or more career clusters based on the results of these inventories. MCIS is linked with O\*Net (Dept. of Labor) which is linked to multiple databases.
2. **Career Cluster/Pathway Information**—By choosing a cluster and then a pathway, a student can access info on national wages and employment trends and an additional link to a specific state's info on wages and employment trends.

The screenshot shows the Montana Career Information System (MCIS) website. The browser address bar displays "Montana Career Information System - Mo...". The website header includes the MCIS logo, the text "Montana Career Information System", and navigation links for "Home", "My Portfolio", and "Log out". A "Quick Links" dropdown menu is also visible. The main navigation bar highlights "My Career Plan - Research" and includes links for "My Career Plan Main Menu" and "Print My Profile".

The "My Plan" section is active, showing a sidebar with "Research and Goals" and sub-links for "Overview", "Activities", and "My Plan". The main content area is titled "My Plan" and contains the following text:

You have explored some options and looked at how these options fit you. You have made some tentative choices about your future. You are now ready to enter your thoughts about your goals - what are you going to do and when? You can enter personal goals and career goals (those specifically related to education and work). You should include goals that you can achieve soon and are important to you right now (short-term) and goals that will take some time to reach (long-term). Remember, your goals will change so feel free to return to this section and update your goals at any time.

After you enter your reflections in the boxes below, you are ready to move to [Education Plans](#).

The "Career Clusters" section follows, defining a career cluster and providing a link to "Definitions of the Career Clusters". Below this, a grid of checkboxes allows users to select their preferred career clusters. The last saved date is 7/29/2008.

<input type="checkbox"/> Agriculture, Food, & Natural Resources	<input type="checkbox"/> Hospitality & Tourism
<input checked="" type="checkbox"/> Architecture & Construction	<input type="checkbox"/> Human Services
<input type="checkbox"/> Arts, Audio/Visual Technology, & Communications	<input type="checkbox"/> Information Technology
<input type="checkbox"/> Business, Management, & Administration	<input type="checkbox"/> Law, Public Safety, & Security
<input type="checkbox"/> Education & Training	<input checked="" type="checkbox"/> Manufacturing, Installation, & Repair
<input type="checkbox"/> Finance	<input type="checkbox"/> Marketing, Sales, & Services
<input checked="" type="checkbox"/> Government & Public Administration	<input type="checkbox"/> Science, Technology, Engineering, & Mathematics

3. **Montana Postsecondary Options by Pathway.** By the click of the mouse, a student may access summary information showing postsecondary options for a particular pathway. Each school listing will be hyperlinked to the college's website.

 <b>MONTANA POSTSECONDARY OPPORTUNITIES</b>			
<b>Montana University System Degree and Program Inventory:</b> <a href="http://www.homepage.montana.edu/~mus/drgin/">http://www.homepage.montana.edu/~mus/drgin/</a> <b>Your Guide to Montana's Certificate and Associate Degree Programs</b> <a href="http://mus.edu/twoyear/YourGuide.html">http://mus.edu/twoyear/YourGuide.html</a>			
Colleges of Technology:	Community Colleges:	Tribal Colleges:	Four Year Colleges/Universities:
BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCOT—Missoula	DCC—Glendive; FVCC—Kalispell; MCC—Miles City	BFCC—Browning; CDKC—Lame Deer; FBCC—Harlem; FPCC—Poplar; LBHC—Crow Agency; SCC—Box Elder; SKC—Pablo	MSU—Bozeman; MSUB—Billings; MSUN—Havre; TECH—Butte; UMCOT—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, and 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>	Utility Line Worker—TECH COT	
<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>	Bricklayers, Building Maintenance Workers, Carpenters, Cement Masons, Electricians, Glaziers, Plumbers, Pipefitters, Roofers, Sheet Metal Workers, Tile Setters  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>	Building Maintenance--UMCOT Building Technology--BFCC, FVCC Carpentry--HCOT, UMCOT, TECH COT, GFCOT, MSU, FPCC Construction Technology--SCC Electrical Technology--FVCC Heating, Ventilation, Air Conditioning--FVCC Highway Construction--SKC Plumbing Technology--FVCC Utility Line Worker--FPCC	
<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>	Building Trades—FVCC, FPCC Carpentry--UMCOT, BLCOT, GFCOT, TECH COT, MSUN Civil Engineering Tech—TECHCOT Construction Technology--HCOT, BFCC Electrical Technology--MSUN, FVCC Heating, Ventilation, Air Conditioning--BLCOT Historic Preservation—TECHCOT Plumbing Technology--MSUN	
<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>	Civil Engineering—TECH Construction Engineering Technology—MSU Environmental Design/Architecture—MSU	

4. **Big Sky Pathway Montana Achievement Plan (MAP):** Students may view a model Pathway MAP based on their high school and college program of choice.

Each student will create a Big Sky Pathway MAP based on their own postsecondary education/training goal and career choice. This should be done under the guidance of parents/guardians, counselors, and teachers. The student’s MAP should be reviewed at least once each year and changes would be made based on the student’s personal career goals. **This MAP would be stored in their own MCIS portfolio.**

<b>Big Sky Pathway MAP for Carpentry/Construction</b>										
<b>High School: Helena High School</b>						<b>College: UM-Helena COT</b>				
<b>UM-HELENA COLLEGE OF TECHNOLOGY DEGREE AND CERTIFICATE OPTIONS:</b>										
<b>Certificate of Applied Science--35 credits</b> One-year program--Provides students with entry-level residential construction skills. The program includes site layout, framing, floors, walls, and roofs, as well as interior and exterior finishing, and welding.					<b>Associate of Applied Science Degree --71 credits</b> Two-year program--provides students with a broader background in the residential and industrial construction field and some background in business. Includes the training listed to the left plus cabinet making, electrical, plumbing, CAD, construction management, estimating, metal construction, and masonry. These classes are taught using a combination of classroom work and hands-on building.					
<b>Helena High School</b>	<b>Grade</b>	<b>English (4 credits)</b>	<b>Math (2 credits)</b>	<b>Science (2 credits)</b>	<b>Social Studies (3 credits)</b>	<b>Health (.5 credit) PE (1.5 credit)</b>	<b>Fine Arts (1 credit)</b>	<b>Career and Technical Education (1 credit)</b>	<b>Other (6 credits)</b>	<b>Recommended student organization(s) and workbased learning:</b>
<b>HIGH SCHOOL DIPLOMA</b>	<b>9</b>	English 1	Algebra	Earth Science	World Cultures	Frosh HP		Basic Tech AND Computer Skills for Life		Skills USA Job Shadows Internships Work Experience
	<b>10</b>	English 2	Geometry	Biology		Soph HP/ Health			Carpentry 1 (2 credits)	
	<b>11</b>	English 3			US History		Choose one		Welding 1  Carpentry 2 (2 credits)	
	<b>12</b>	English 4	MAT112T Technical Math for Carpentry		Govt				Welding 2	

<b>UM-Helena College of Tech</b>		<b>English</b>	<b>Math</b>	<b>Business or Office Tech</b>	<b>Human Relations</b>	<b>Welding</b>	<b>Construction</b>
<b>CERTIFICATE (2 SEMESTERS)</b>	Year 1 Sem 1		MAT112T Technical Math for Carpentry	OT112 Intro to Computers			CSTR103 Occupational Related Safety and Tool Usage CSTR120 Rough Framing - Floors, Walls, Trusses, and Rafters CSTR125 Construction Building Lab 1 CSTR145 Drafting, Blueprint Reading, and House Development
	Year 1 Sem 2	ENG107T Technical Commun					CSTR131 Windows, Doors, and Exterior Finishing 3 CSTR135 Insulation and Energy Building Practices 1 CSTR150 Roofing Applications 3 CSTR160 Drywall Application and Finishing 3 CSTR165 Cabinet Installation, Interior Finish, and Painting 3 CSTR171 Construction Building Lab II
<b>A.S. DEGREE (4 SEMESTERS)</b>	Year 2 Sem 1			BUS105 Intro to Business	HR110T Career Dev and Human Relations		CSTR200 Light Equipment and Rigging 2 CSTR205 Computer Aided Design 2 CSTR216 Advanced Structural Lab I 5 CSTR260 Advanced Framing Systems
	Year 2 Sem 2					WELD100 Welding Fund	CSTR218 Site Prep, Foundations and Industrial Concrete CSTR220 Construction Project Management CSTR225 Decks and Patios CSTR226 Advanced Structural Lab II CSTR230 Cabinet Making CSTR250 Construction Estimating
		<b>Required High School Course</b>	<b>High School Elective</b>	<b>Tech Prep Course</b>	<b>Dual Credit Course</b>	<b>College Course</b>	<b>On-line Course</b>