Request for Approval with Assurances
Montana Big Sky Pathways (Programs of Study)

The Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV) calls for states to offer "career and technical programs of study," known as Big Sky Pathways in Montana, as an option to students and their parents when planning for and completing future coursework. These programs, at a minimum, must:

- Incorporate and align secondary and postsecondary education elements,
- Include academic and CTE content in a coordinated, non-duplicative progression of courses,
- Offer the opportunity, where appropriate, for secondary students to acquire postsecondary credits, and
- Lead to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree.

Assurances:
By my signature on this form, I assure that the proposed Big Sky Pathway submitted for approval by this high school/college satisfies the 10 stated requirements. For approval, all 10 requirements must be checked.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Checked</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Includes all state and local graduation requirements</td>
<td>Y</td>
</tr>
<tr>
<td>2. Identifies the appropriate secondary CTE, academic, and recommended elective courses offered by this high school which will prepare the student for college-level courses without remediation</td>
<td>Y</td>
</tr>
<tr>
<td>3. Outlines a non-duplicative sequence of courses from grades 9-12 and from secondary to postsecondary education</td>
<td>Y</td>
</tr>
<tr>
<td>4. Prepares students for entry into a postsecondary program or apprenticeship</td>
<td>Y</td>
</tr>
<tr>
<td>5. Leads to an industry-recognized postsecondary credential, degree or employment</td>
<td>Y</td>
</tr>
<tr>
<td>6. Includes appropriate state standards and/or industry skills standards. Identify standards used: MT State Career &amp; Tech Standards</td>
<td>Y</td>
</tr>
<tr>
<td>7. Aligns with an AAS program offered by a Montana college (college of technology, community college, tribal college, MSU-Northern)</td>
<td>Y</td>
</tr>
<tr>
<td>8. Links with a web-based guidance delivery system such as MCIS If using something other than MCIS, please indicate:</td>
<td>Y</td>
</tr>
<tr>
<td>9. When applicable, dual enrollment opportunities have been identified.</td>
<td>Y</td>
</tr>
<tr>
<td>10. When applicable, Advanced Placement, IB courses and CTE START (statewide articulations) have been identified</td>
<td>Y</td>
</tr>
</tbody>
</table>

High School Principal's Signature: [Signature] Date: 2-22-11

College Chief Academic Officer's Signature: [Signature] Date: 2-24-11

OCHE Approval: [Signature] Date of Approval: 2-14-11

Both the college and the high school will receive a signed copy when the BSP is approved.

January 2011
**HIGH SCHOOL:** Browning High School  
**COLLEGE:** MSU Northern  
**COLLEGE DEGREE PROGRAM:** Associates of Applied Science Design Drafting Technology

### Cluster Overview:
Careers in the Architecture and Construction cluster involve the designing, planning, managing, building, and maintaining the built environment.

### Pathway Options:
- Design/Pre-Construction
- Construction
- Maintenance/Operations

**Occupation Examples:**
Architect; Carpenter; Civil Engineer; Construction Foreman/Manager; Contractor; Demolition Engineer; Drafter; Drywall Installer; Electrician; Electronic Systems Technician; Equipment/Material Manager; General Contractor/Builder; Heating, Ventilation, Air Conditioning and Refrigeration Mechanic; Interior Designer; Painter; Paperhanger; Plumber; Project Estimator; Project Inspector; Roofer; Safety Director; Sheet Metal Worker; Tile and Marble Setter

For a complete listing, go to: [http://online.onetcenter.org/find/career?c=2&g=Go](http://online.onetcenter.org/find/career?c=2&g=Go)

### SUGGESTED HIGH SCHOOL COURSES

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Description</th>
<th>Required Courses</th>
<th>Recommended CTE Cluster Foundation Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th</td>
<td>Graduation Requirements Workforce/2-Year College Prep</td>
<td>English 9, Int. Math 1, World Geography, Health Enhancement, Physical Science 9, Fine Arts (1 Credit), 2 Credits from Recommended CTE Cluster Foundation Courses</td>
<td>Computer Skills, Computer Technology Web Page, Development, Marketing, Drivers Education, Ag Leadership</td>
</tr>
<tr>
<td></td>
<td>4-Year MT College/Univ Prep (Rigorous Core)</td>
<td>English 9, Int. Math 1, World Geography, Health Enhancement, Physical Science 9, Fine Arts (1 Credit), 2 Credits from Recommended CTE Cluster Foundation Courses</td>
<td>CTE Cluster Foundation Courses/Recommended CTE Courses</td>
</tr>
<tr>
<td></td>
<td><strong>CTE and/or Electives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10th</td>
<td>Graduation Requirements Workforce/2-Year College Prep</td>
<td>English 10, Int. Math 2, World History, Blackfeet Studies, Biology, PE/Conditioning, 2 Credits from Recommended CTE Cluster Foundation Courses</td>
<td>Other Recommended CTE Courses: CAD, Woods, Welding, Construction, Marketing, Drivers Ed, Photography</td>
</tr>
<tr>
<td></td>
<td>4-Year MT College/Univ Prep (Rigorous Core)</td>
<td>English 10, Int. Math 2, World History, Blackfeet Studies, Biology, PE/Conditioning</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>CTE and/or Electives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11th</td>
<td>Graduation Requirements Workforce/2-Year College Prep</td>
<td>English 11, Int. Math 3, U.S. History, Interpersonal Communications, Physics, 2.5 Credits from Recommended CTE Courses</td>
<td>CTE Student Organization(s): TSA, VICA, FFA, BPA, FCCLA</td>
</tr>
<tr>
<td></td>
<td>4-Year MT College/Univ Prep (Rigorous Core)</td>
<td>English 11, Int. Math 3, U.S. History, Interpersonal Communications, Physics, PE/Conditioning, 2.5 Credits from Recommended CTE Courses</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>CTE and/or Electives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12th</td>
<td>Graduation Requirements Workforce/2-Year College Prep</td>
<td>English 12, Government, 5 Credits from Recommended CTE Courses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4-Year MT College/Univ Prep (Rigorous Core)</td>
<td>English 12, Int. Math 4, Government, Chemistry/Astronomy/AP Biology, 4 Credits from Recommended CTE Courses</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>CTE and/or Electives</strong></td>
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</tr>
</tbody>
</table>

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

- **CTE START courses:**
- **Advanced Placement or IB courses:**
- **Dual Enrollment courses:**
- **Online courses:**
- **Other:**

### POSTSECONDARY PROGRAM OF STUDY
<table>
<thead>
<tr>
<th>Period</th>
<th>Math</th>
<th>English</th>
<th>Major</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>13—Semester 2</td>
<td>13 Sem 2</td>
<td>Trigonometry</td>
<td></td>
<td>Descriptive Geometry 3D CAD Intro to Comp/MS Office</td>
</tr>
<tr>
<td>14—Semester 1</td>
<td>14 Sem 1</td>
<td></td>
<td>Mfgt Processes &amp; Mat'l's Residential Drafting Engineering Mechanics College Physics I</td>
<td></td>
</tr>
<tr>
<td>14—Semester 2</td>
<td>14 Sem 2</td>
<td></td>
<td>Machine Drafting Topographic Drafting/GIS MS ACCESS Surveying</td>
<td></td>
</tr>
</tbody>
</table>

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**MONTANA POSTSECONDARY OPPORTUNITIES**

*Montana University System Degree and Program Inventory: [http://www.homepage.montana.edu/~mus/draginv/](http://www.homepage.montana.edu/~mus/draginv/)*

Your Guide to Montana's Certificate and Associate Degree Programs: [http://mus.edu/twogear/YourGuide.html](http://mus.edu/twogear/YourGuide.html)

**Colleges of Technology:**
- BLCOT—Billings
- GFCC—Great Falls
- HCTC—Helena
- TECHC—Butte
- UMCOT—Missoula
- GCP—Bozeman

**Community Colleges:**
- DCC—Glendive
- FVCC—Kalispell
- MCC—Miles City

**Tribal Colleges:**
- BFCC—Browning
- CDKC—Lame Deer
- FBCC—Harlem
- FPCC—Poplar
- LSHC—Crow Agency
- SCC—Box Elder
- SKC—Pablo

**Four Year Colleges/Universities:**
- MSU—Bozeman
- MSUB—Billings
- MSUN—Havre
- TECH—Butte
- UM—Missoula
- UMW—Dillon

**MILITARY**
- 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](http://todaysmilitary.com)

**PROFESSIONAL CERTIFICATE**
- Requires diploma or GED
- Less than 30 credits; little/no general ed credits
- Complete in one year or less
- Cabinet & Furniture Technology — FVCC
- Line Professional/Utility Line Worker — TECHCOT

**APPRENTICESHIP**
- Requires diploma or GED
- Must be at least 18
- Minimum 2,000 hours of supervised experience
- 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: [http://wsd.dli.mt.gov/apprenticeship/default.asp](http://wsd.dli.mt.gov/apprenticeship/default.asp)

**CERTIFICATE OF APPLIED SCIENCE**
- Requires diploma or GED
- 30-45 credits; limited general education credits
- Complete in one year or less
- Building Maintenance — UMCOT
- Building Technology & Trades — FVCC, MCC, FPCC, BFCC
- Carpentry — HCTC, UMCOT, TECH COT, GFCC, MSUN, FBCCOL
- Construction Technology — SCC
- Heating, Ventilation, Air Conditioning — FVCC
- Line Professional/Utility Line Worker — FPCC
- Plumbing Technology — FVCC

**ASSOCIATE’S OF APPLIED SCIENCE DEGREE**
- Requires diploma or GED
- 60-72 credits; includes 15-25 general ed credits
- Complete in two years (if prepared academically in math and English)
- Building Technology & Trades — FVCC, MCC, FPCC
- Carpentry — UMCOT, BLCOT, TECH COT, MSUN, FPCC
- Construction Technology — HCTC, BFCC
- Plumbing Technology — MSUN

**BACCALAUREATE DEGREE**
- Requires 4-year college prep for admission
- 128 credits (approximately)
- Complete in four years
- Civil Engineering — TECH
- Construction Engineering Technology — MSU
- Environmental Design/Architecture — MSU

*Degree and Program Inventory above may not be all inclusive*