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>Name of Big Sky Pathway (cluster level):</th>
<th>Architecture &amp; Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of High School:</td>
<td>North Star Public Schools</td>
</tr>
<tr>
<td>Names of Secondary Lead Teacher and Counselor:</td>
<td>Simonson, Spindler</td>
</tr>
<tr>
<td>The Lead Secondary Teacher will be contacted if OPI has questions about this request</td>
<td></td>
</tr>
<tr>
<td>Lead Teacher's email address:</td>
<td><a href="mailto:Simonson@northstar.k12.mt.us">Simonson@northstar.k12.mt.us</a></td>
</tr>
<tr>
<td>Lead Teacher's phone number:</td>
<td>(406) 356-4481</td>
</tr>
<tr>
<td>Name of College:</td>
<td>MSU - Great Falls</td>
</tr>
<tr>
<td>Name of College Program:</td>
<td>Carpentry</td>
</tr>
<tr>
<td>Name of College Lead Faculty Member:</td>
<td>Patrick Schoenen</td>
</tr>
</tbody>
</table>

Requirements for Approval

1. Includes all state and local graduation requirements
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
3. Outlines a non-duplicative sequence of courses from grades 9-12 and from secondary to postsecondary education
4. Prepares students for entry into a postsecondary program or apprenticeship
5. Leads to an industry-recognized postsecondary credential, degree or employment
6. Includes appropriate state standards and/or industry skills standards. Identify standards used: Montana Career and Technical Education Standards
7. Aligns with an AAS program offered by a Montana college (college of technology, community college, tribal college, MSU-Northern)
8. Links with a web-based guidance delivery system such as NCEIS
   If using something other than NCEIS, please indicate:
9. When applicable, dual enrollment opportunities have been identified.
10. When applicable, Advanced Placement, IB courses and CTE START (statewide articulations) have been identified.

High School Principal’s Signature: [Signature] Date: 1/11/11
H.S. Advisory Committee Member’s Signature: [Signature] Date: 1/11/11

College Chief Academic Officer’s Signature: [Signature] Date: 2/26/11
College Lead Faculty Member’s Signature: [Signature] Date: 2/16/2011

OPI Specialist Approval: [Signature] Date of Approval: 5/26/2011
GCHE Approval: [Signature] Date of Approval: 11/7/2011

Both the college and the high school will receive a signed copy when the BSP is approved.
**High School:** North Star Public Schools  

**College:** Montana State University—Great Falls  

**College Degree Program:** Associate of Applied Science in Carpentry  

## 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/findcareer?c=2&q=Go

## Suggested High School Courses

<table>
<thead>
<tr>
<th>Grade</th>
<th>Graduation Requirements</th>
<th>English, Math (Algebra I or Algebra 2), PE/Health, Physical Science, General Business, Computer Applications I</th>
<th>Recommended CTE Cluster Foundation Courses</th>
</tr>
</thead>
</table>
| 9th   | Workforce/2-Year College Prep | English 9, Math (Algebra 1 or Algebra 2), PE/Health, Physical Science, General Business, Computer Applications I | Shop 7 & 8  
Computer Applications I  
General Business  
Art I |
| 10th  | Workforce/2-Year College Prep | English 10, Math (Algebra II or Advanced Math), Biology, PE/Health, Computer Applications II, World History | Other Recommended CTE Courses:  
Construction  
Welding  
CAD  
Woods I, II  
Computer Applications II  
Accounting I, II, III  
Art I II |
| 11th  | Workforce/2-Year College Prep | English 11, U.S. History, Math (Advanced Math or Pre-Calculus), Science (Anatomy & Physiology, Chemistry, or Physics) | CTE Student Organization(s):  
BPA  
FCCLA  
Skills USA |
| 12th  | Workforce/2-Year College Prep | English 12 or AP English, Government | Advanced Graduation Requirements: 1 year Fine Art, 2 year Career and Technical Education, 4 years electives  
Additional 4-Year College Prep Requirements: two credits of the following: Spanish, Fine Arts, and/or Career and Technical Education  
Additional Rigorous Core Requirements: 4 years of math (at least one above Advanced Math), 4 years of lab sciences (Earth Science, Biology, A & P, Chemistry or Physics), a combination of four years of Spanish, Fine Arts, and/or Career and Technical Education |

## Advanced Learning Opportunities

**CTE Start Courses:**

**Advanced Placement or IB Courses:** AP English

**Dual Enrollment Courses:**

**Online Courses:** Montana Digital Academy

Architecture & Construction, page 1 of 2  

November 2010
### POSTSECONDARY PROGRAM OF STUDY

<table>
<thead>
<tr>
<th>Math</th>
<th>English</th>
<th>Major</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>13—Semester 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13—Semester 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14—Semester 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14—Semester 2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### MONTANA POSTSECONDARY OPPORTUNITIES

*Montana University System Degree and Program Inventory: [http://www.homepage.montana.edu/~mus/drgmv/](http://www.homepage.montana.edu/~mus/drgmv/)
Your Guide to Montana’s Certificate and Associate Degree Programs: [http://mus.edu/twoyear/YourGuide.html](http://mus.edu/twoyear/YourGuide.html)*

**Colleges of Technology:**
- BLCOT—Billings; GFCOT—Great Falls; HCAT—Helena; TECH—Butte; UMCOT—Missoula; GCP—Bozeman

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

**Tribal Colleges:**
- BFCC—Browning; CDKC—Lame Deer; FFCC—Harms; FPCC—Poplar; LBHC—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

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 — HCOT, UMCOT, TECH COT, GFCOT, MSUN, FBCOL
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 — HCOT, 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