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 to the best of my ability 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. NOTE: only the OPI Specialist has the authority to approve.

<table>
<thead>
<tr>
<th>Name of Big Sky Pathway (cluster level):</th>
<th>Agriculture, Food, Natural Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of High School:</td>
<td>Shields Valley H.S.</td>
</tr>
<tr>
<td>Names of Secondary Lead Teacher and Counselor:</td>
<td>Jim Rose, Lisa Hild</td>
</tr>
<tr>
<td>The Lead Secondary Teacher will be contacted if DPI has questions about this request</td>
<td></td>
</tr>
<tr>
<td>Lead Teacher’s email address:</td>
<td><a href="mailto:suffe@hotmai.com">suffe@hotmai.com</a></td>
</tr>
<tr>
<td>Lead Teacher’s phone number:</td>
<td>406-686-490</td>
</tr>
<tr>
<td>Name of College:</td>
<td>MVR-N</td>
</tr>
<tr>
<td>Name of College Program:</td>
<td>Ag Mech Tech</td>
</tr>
<tr>
<td>Name of College Lead Faculty Member:</td>
<td>Wendi Boron</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
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 MCIS
   If using something other than MCIS, 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: 3-7-11

H.S. Advisory Committee Member’s Signature: [Signature]
Date: 3-7-11

College Chief Academic Officer’s Signature: [Signature]
Date: 1-23-11

College Lead Faculty Member’s Signature: [Signature]
Date: 1-23-11

OPI Specialist Approval: [Signature]
Date of Approval: [Date]

OICE Approval: [Signature]
Date of Approval: [Date]

Both the college and the high school will receive a signed copy when the BSP is approved.
### HIGH SCHOOL: Shields Valley High School

**COLLEGE:** MSU Northern

**COLLEGE DEGREE PROGRAM:** AAS Agricultural Mechanics Technology

<table>
<thead>
<tr>
<th>Cluster Overview: Careers in the Agriculture, Food and Natural Resources cluster involve the planning, implementation, production, management, processing, and/or marketing of agricultural commodities and services.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pathway Options:</strong></td>
</tr>
<tr>
<td>Food Products and Processing Systems</td>
</tr>
<tr>
<td>Plant Systems</td>
</tr>
<tr>
<td>Animal Systems</td>
</tr>
<tr>
<td>Power, Structural &amp; Technical Systems</td>
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<tr>
<td>Natural Resources Systems</td>
</tr>
<tr>
<td>Environmental Service Systems</td>
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<tr>
<td>Agribusiness Systems</td>
</tr>
</tbody>
</table>

### SUGGESTED HIGH SCHOOL COURSES

<table>
<thead>
<tr>
<th>Grade</th>
<th>Requirements</th>
<th>Electives</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>Vocational Agriculture I</td>
<td>Agriculture Education I, II</td>
</tr>
<tr>
<td></td>
<td>4-Year MT College/Univ Prep (Rigorous Core)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10th</td>
<td>Graduation Requirements Workforce/2-Year College Prep</td>
<td>Vocational Agriculture II</td>
<td>Agriculture Education III, IV, Agriculture Mechanics</td>
</tr>
<tr>
<td></td>
<td>4-Year MT College/Univ Prep (Rigorous Core)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11th</td>
<td>Graduation Requirements Workforce/2-Year College Prep</td>
<td>Vocational Agriculture III</td>
<td>CTE Student Organization(s): FFA</td>
</tr>
<tr>
<td></td>
<td>4-Year MT College/Univ Prep (Rigorous Core)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12th</td>
<td>Graduation Requirements Workforce/2-Year College Prep</td>
<td>Vocational Agriculture IV</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4-Year MT College/Univ Prep (Rigorous Core)</td>
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<td></td>
</tr>
</tbody>
</table>

### ADVANCED LEARNING OPPORTUNITIES

**High School to College/Career Linkages**

**CTE START courses:**

**Advanced Placement or IB courses:**

**AP English, AP Calculus**

**Dual Enrollment courses:**

**Online courses:**

**MT Digital Academy Offerings**

**Other:** Supervised Agricultural Experience (SAE) and participation in appropriate FFA activities support and reinforce classroom and laboratory learning and should be a requirement for all students

### 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>SPCH 141 Fund. Of Speech OR SPCH 142</td>
<td>AGMT 130 Intro to Agricultural Tractors OR AGMT 210 Tillage, Planting &amp;</td>
<td>DIES 104 Intro. To Diesel Engines DIES 114 Intro to Diesel Engines Lab</td>
</tr>
<tr>
<td>13—Semester 2</td>
<td>Interp. Comm</td>
<td>Spraying Imps</td>
<td>ATDI 134 Electrical/Electronic Systems I DIES 115 Intro to Diesel Fuel Systems</td>
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<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>M 111 Technical Math OR M121 College Algebra OR M145 Math for Liberal Arts</td>
<td>AGMT 110 Intro to Ag Machines and Equip AGMT 120 Forage Implements OR AGMT 205 Grain Harvesting Equipment</td>
<td>ATDI 210 Tillage, Planting &amp; Spraying Imps. OR AGMT 130 Intro to Agricultural Tractors</td>
<td>DIES 216 Heavy Duty Power Trains DIES 262 Diesel Engine Diagnosis &amp; Repair DIES 272 Diesel Engine Diagnosis &amp; Repair Lab WLDG 260 Repair &amp; Maintenance Welding</td>
</tr>
<tr>
<td>14—Semester 2</td>
<td>WRIT 108 Elem Tech/Writing</td>
<td>AGMT 205 Grain Harvesting Equipment OR AGMT 120 Forage Implements</td>
<td>ATDI 264 Ad Elet/Electronic Sys II ATDI 265 Heating &amp; Air Conditioning DIES 204 Intro/Hydraulics &amp; Pneumatics Lab</td>
</tr>
</tbody>
</table>

**MONTANA POSTSECONDARY OPPORTUNITIES**

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

| Colleges of Technology:  
BLCOT—Billings; GFCOT—Great Falls; HCOT—Helena; TECHCOT—Butte; UMCCOT—Missoula; GC—Bozeman | Community Colleges:  
DCC—Glendive;  
FVCC—Kalispell;  
MM—Missoula  
Miles City | Tribal Colleges:  
BFCC—Browning;  
CDKC—Lame Deer;  
FBCC—Harlem;  
FPCC—Poplar LBN—Crow Agency;  
SBC—Box Elder;  
SKG—Pablo | Four Year Colleges/Universities:  
MUS—Bozeman;  
MSUB—Billings;  
MUS—Missoula;  
TECH—Butte;  
UM—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  
Agri-Mechanics Machinery/Technology — MSUN

**APPRENTICESHIP**  
- Requires diploma or GED  
- Must be at least 18  
- Minimum 2,000 hours of supervised experience  
Farm Equipment Mechanics  
See the MT Dept of Labor website for more information: [http://wsl.dill.mt.gov/apprenticeship/default.asp](http://wsl.dill.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  
Agri-Business Technology — MCC  
Agri- Mechanics Machinery/Technology — DCC  
Livestock Technology — DCC  
Natural Resource Management — 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)  
Agri-Business Technology — DCC  
Agri-Business Technology—Equitation — DCC  
Agricultural Science/Technology — MSUN  
Agri-Mechanics Machinery/Technology — MSUN, DCC  
Equine Studies — UMW, MCC  
Natural Horsemanship — UMW  
Natural Resource Management — FVCC, BFCC
| BACCALAUREATE DEGREE | Agriculture Business — MSU  
|                       | Agriculture Education — MSU  
|                       | Animal Science — MSU  
|                       | Biotechnology — MSU  
|                       | Environmental Horticulture — MSU  
|                       | Environmental Sciences — MSU  
|                       | Land Rehabilitation — MSU  
|                       | Land Resource Sciences — MSU  
|                       | Natural Resources & Rangeland Technology — MSU  
|                       | Plant Science — MSU  
|                       | Sustainable Food & Bio-energy Systems — MSU  
|                       | Earth Sciences — MSU  
|                       | Biological Sciences — MSU  
|                       | Biology — UM  
|                       | Environmental Studies — UM  
|                       | Forestry — UM  
|                       | Resource Conservation — UM  
|                       | Wildland Restoration — UM  
|                       | Wildlife Biology — UM  
|                       | Environmental Engineering — TECH  
|                       | Mining Engineering — TECH  
|                       | Geological Engineering — TECH  
|                       | Environmental Science — UMW, SKC  
|                       | Earth Science — UMW  
|                       | Environmental Science & Forestry — SKC  

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