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 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.

| Name of Big Sky Pathway (cluster level): Agriculture, Food and Natural Resources |
| Name of High School: Lame Deer High School |
| Names of Secondary Lead Teacher and Counselor: Michael Morgan |
| The Lead Secondary Teacher will be contacted if OPI has questions about this request |
| Lead Teacher's email address: mikenmorgan@lamedeer.k12.mt.us |
| Lead Teacher's phone number: 406-477-8900 Ext. 1216 |
| Name of College: Chey Mountain College |
| Name of College Program: Welding |
| Name of College Lead Faculty Member: Jim Hafer |

**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, identifies standards used: Natural Area Content 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 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: 8/25/11
H.S. Advisory Committee Member's Signature: [Signature] Date: 8/25/11
College Chief Academic Officer's Signature: [Signature] Date: 8/30/11
College Lead Faculty Member's Signature: [Signature] Date: 8/30/11

Please submit this Request for Approval form and a copy of the Big Sky Pathway Proposal to:
OPI, Career and Technical Education, P.O. Box 202501, Helena, Montana 59620-2501

OPI Specialist Approval: [Signature] Date of Approval: 9/1/11
OCHE Approval: [Signature] Date of Approval: 2/28/2013

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

January 2011
<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>
<th>Pathway Options:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Products and Processing Systems</td>
<td></td>
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<tr>
<td>Plant Systems</td>
<td></td>
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<tr>
<td>Animal Systems</td>
<td></td>
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<tr>
<td>Power, Structural &amp; Technical Systems</td>
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<tr>
<td>Natural Resources Systems</td>
<td></td>
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<tr>
<td>Environmental Service Systems</td>
<td></td>
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<tr>
<td>Agribusiness Systems</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation Examples:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Chemical Dealer, Aquaculture Aquaculture, Environmental Compliance-Assurance Manager, Farm Manager, Health and Safety Sanitarian, Meat Cutter-Meat Grader, Park Manager, Produce Buyer, Recycling Technician, Wildlife Manager, Botanist, Agricultural Educator, Ecologist, Environmental Engineer, Fish and Game Officer, Bank Loan Officer, Plant Pathologist, Veterinarian</td>
</tr>
</tbody>
</table>

For a complete listing go to: [http://www.ptcc.edu/advising/deer/degmap.html](http://www.ptcc.edu/advising/deer/degmap.html)

### SUGGESTED HIGH SCHOOL COURSES

<table>
<thead>
<tr>
<th>Grade</th>
<th>Requirements</th>
<th>Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th</td>
<td>Graduation Requirements Workforce 2-Year College Prep</td>
<td>Cluster Foundation Courses</td>
</tr>
<tr>
<td>4-Year MT College Univ Prep (Rigorous Core)</td>
<td>English, Math, Earth Science, Health Enhancement, World History</td>
<td></td>
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<tr>
<td>CTE and/or Electives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10th</td>
<td>Graduation Requirements Workforce 2-Year College Prep</td>
<td>Cluster Foundation Courses</td>
</tr>
<tr>
<td>4-Year MT College Univ Prep (Rigorous Core)</td>
<td>English, Integrated Math I, Earth Science, Elective credits from the following areas; Fine Arts, CTE, Cheyenne Language, and Jobs for Montana Graduates</td>
<td></td>
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<tr>
<td>CTE and/or Electives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11th</td>
<td>Graduation Requirements Workforce 2-Year College Prep</td>
<td>Cluster Foundation Courses</td>
</tr>
<tr>
<td>4-Year MT College Univ Prep (Rigorous Core)</td>
<td>English, Integrated Math II, Elective credits from the following areas; Fine Arts, CTE, Cheyenne Language and Jobs for Montana Graduates</td>
<td></td>
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<tr>
<td>CTE and/or Electives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12th</td>
<td>Graduation Requirements Workforce 2-Year College Prep</td>
<td>Cluster/Pathway Courses</td>
</tr>
<tr>
<td>4-Year MT College Univ Prep (Rigorous Core)</td>
<td>English, U.S. Government, CTE, Elected Government</td>
<td></td>
</tr>
<tr>
<td>CTE and/or Electives</td>
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</tbody>
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### ADVANCED LEARNING OPPORTUNITIES

**High School to College/Career Linkages**

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

### POSTSECONDARY PROGRAM OF STUDY

<table>
<thead>
<tr>
<th>13—Semester 1</th>
<th>Math</th>
<th>English</th>
<th>Major</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>071 – 073</td>
<td>College Reading</td>
<td>Welding</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 13—Semester 2
- Math Skills: 073 - 075
- Writing I: College Reading & Writing I
- Welding: Welding

### 14—Semester 1
- Math Skills: 076 - 079
- English Comp I: English Comp I
- Welding: Welding

### 14—Semester 2
- Math Skills: College Level Math
- English Comp II: English Comp II
- Welding: Welding

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### MONTANA POSTSECONDARY OPPORTUNITIES

**Montana University System Degree and Program Inventories:** [Website](http://www.montana.edu/mus/degrees/index.html)

**Your Guide to Montana's Certificate and Associate Degree Programs**

**Colleges of Technology:**
- BLCOT—Billings
- GFCOT—Great Falls
- HCC—Helena
- TECHCOT—Butte
- UNMC—Missouri State
- GCP—Bozeman

**Community Colleges:**
- GCC—Great Falls
- FCVC—Kalispell
- MCC—Missoula

**Tribal Colleges:**
- BFCC—Browning
- COKC—Lame Deer
- FBCC—Hartford
- FPCC—Poplar
- LBHC—Crow Agency
- SC—Box Elder

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

### MILITARY
- Requires diploma or GED
- 17 with parental consent; 18 without
- Air Force, Air Guard, Army, Coast Guard, Marines, and Navy
- For more information: [Website](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

### 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
- Livestock Technology — DCC

### 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
- Agricultural Science/Technology — MSUN
- Equine Studies — UMW, MCC

### BACCALAUREATE DEGREE
- Requires 4-year college prep for admission
- 128 credits (approximately)
- Complete in four years
- Agriculture Business — MSU
- Agriculture Education — MSU
- Animal Science — MSU
- Biotechnology — MSU
- Environmental Horticulture — MSU
- Environmental Sciences — MSU
- Land Rehabilitation — 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
- Wildlife Restoration — UM
- Wildlife Biology — UM
- Environmental Engineering — TECH
- Mining Engineering — TECH
- Geologic Engineering — TECH
- Environmental Science — UMW, SKC
Degree and Program Inventory above may not be all inclusive