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Applicant:	2424 MSU Northern
Application:	2016-2017 Perkins Post Secondary - 00
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Perkins Postsecondary

Program: Carl D. Perkins Vocational and Technical Education Act of 2006, Title I.

Program Manager: Mindi Federman Askelson
Phone: 406-444-0313
Email: maskelson@montana.edu

Due Date: May 16, 2016

Purpose: To develop more fully the academic and career and technical skills of secondary and postsecondary students who enroll in CTE by developing and assisting students in meeting high standards, integrating academic and career and technical instructions, linking secondary and postsecondary education, increasing state and local flexibility, collecting and disseminating research and information on best practices, providing technical assistance and professional development, supporting partnerships among diverse stakeholders, and providing individuals with the knowledge and skills to keep the U.S. competitive.

Legislation: Carl D. Perkins Career and Technical Education Act of 2006 Title I 20 U.S.C. 2301 et seq. (Pub. L. 109-270)

Contact Information Click for Instructions

*** Denotes required field**

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Application Approval / Disapproval Copy Email Addresses

☑ Check to add up to five (5) email addresses to receive copies of automated approval/disapproval notices. The Authorized Representative who submits the application does not need to be included in this list.

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Quarterly Reports Click for Instructions

To the best of your ability, please describe the specific outcomes that resulted from the utilization of Perkins funds in the current grant cycle, addressing each specific project or program identified in that cycle`s local grant application.

R1 Strengthening the academic and career technical skills of students participating in career and technical education (CTE) programs by supporting academic and CTE.

Project/Program: (500 of 500 maximum characters used)

Nursing students need to achieve the technical skills proficiency to operate the highly technical Intravenous systems and equipment in a variety of settings.These settings include:acute care,outpatient clinics,community settings,short-term transitional care,long term care,home care,and in private businesses.Simulation in the laboratory,one teaching technique utilized to assist nursing students to gain proficiency,requires the appropriate intravenous system,equipment and consumable training aides

Final Measurable Outcome: (433 of 500 maximum characters used)

By graduation the nursing students demonstrate proficiency in all aspects of the intravenous system and equipment. Following graduation in May 2015, 45 students passed their NCLEX exam. Nursing was able to negotiate with vendors and get a better price on the Alaris pumps. Doing so allowed them to free up some money to put toward Sigma IV pumps that were much needed to teach to the level that hospitals are looking for. 1P1, 3P1

Measure: 2P1:Credential, Certificate or Diploma

Project/Program: ([count] of 500 maximum characters used)

Revamp the Plumbing Technology labs on campus that simulate an actual plumbing project/worksite. Implement new hydronic heating equipment that is needed for this days for training to make graduates more employable.

Final Measurable Outcome: ([count] of 500 maximum characters used)

Students constructed new lab modules that made them more proficient in carpentry, layout, drilling plumbing systems, setting cabinets and fixtures and testing all plumbing units. Training on the new heating equipment allowed 2 year students to be certified in hydronic heating that gave them a higher skill and educational level that will allow them to move seamlessly into the workforce.

Measure: 4P1:Student Placement

Project/Program: ([count] of 500 maximum characters used)

The Electrical Technology project is to create a new commercial wiring laboratory for the students to have practical hands-on experience working with steel studs and conduit. Wire pulling in conduit, light fixtures and switching along with receptacles and stub ups for data/communication boxes.

Final Measurable Outcome: ([count] of 500 maximum characters used)

A classroom was converted into a new lab for the electrical technology program so that it gives a better representation of what the students will actually being seeing in the field once they graduate from the program and are placed in the workforce. High voltage and PCL is being taught out of this classroom/lab. 4P1

Measure: 3P1:Student Retention or Transfer

R2 Linking CTE at the secondary and postsecondary level.

Project/Program: (114 of 500 maximum characters used)

Attended MPSOEC, Presented at MTACTE Conference, Attended Winter FFA Conference, Pathways Bridge Program, TekNoXpo

Final Measurable Outcome: (492 of 500 maximum characters used)

The BSP Coordinator attended 4 MPSEOC Tours; Havre, Glasgow, Lewistown and Cut Bank. Presentation at MTACTE regarding the importance of business & industry partnerships and how to implement them in high schools. Meet with 9 high school Ag. Teachers during the Winter FFA Conference in Big Sandy to start Pathways. Brought 16 Big Sandy High School students to campus to do hands on demonstrations in diesel, ag., ag. mech., and auto. Brought 220 high school students to campus for TekNoXpo.

Measure: 3P1:Student Retention or Transfer

R3 Provide students with strong experience in and understanding of all aspects of an industry (which may include work-based experiences).

Project/Program: (58 of 500 maximum characters used)

Two large career fairs, co-ops, info sessions, interviews.

Final Measurable Outcome: (399 of 500 maximum characters used)

42 employers made up the career fair in the fall and spring. Northern has co-oped 211 students since summer of 2015. We've had info sessions and interviews w/ General Electric, BNSF, Wartsilla, Modern Machinery, Zachry Construction, Fiat, Muth Electric, Pape, Advantage Technical Resourcing, Knife River, Tractor & Equipment. A Ford Engagement Day was held with 7 dealerships around MT attending.

Measure: 4P1:Student Placement

R4 Developing, improving, or expanding the use of technology in CTE (which may include training, STEM initiatives, and collaboration with business and industry.

Project/Program: (117 of 500 maximum characters used)

Nursing, plumbing and agriculture all implemented new technology into their classrooms with the use of Perkins funds.

Final Measurable Outcome: (380 of 500 maximum characters used)

4 Alaris 8000 pumps, 4 Alaris 8100 pumps, 2 Alaris 8110 pumps, 2 Alaris 8120 PCA pumps. Hydronic heating equipment. 3 Leica EZ4 HD digital Stereo microscopes, 7 soil thermometers. Our diesel, ag. mechanic and automotive partners have loaned our programs nearly $2 millions in new equipment to work on this year to gain hands on experience on the latest and greatest technology.

Measure: 4P1:Student Placement

R5 Provide professional development programs to secondary and post-secondary teachers, faculty, administrators, and career guidance and academic counselors who are involved in integrated CTE programs.

Project/Program: (41 of 500 maximum characters used)

NATEF, National ACTE Conference, MT ACTE.

Final Measurable Outcome: (444 of 500 maximum characters used)

The BSP Coordinator attended the NATEF conference. Due to lack of administration at Havre High no one could attend. Presentation to high school CTE teachers & counselors at MTACTE. 5 Northern diesel faculty members were trained and certified in NC3; multi-meters, torch, precision measuring and scan tools. These faculty members are now able to train and certify Northern students, high school students and give training to industry partners.

Measure: 1P1:Technical Skill Attainment

R6 Develop and implement evaluations of the CTE programs carried out with Perkins funds, including an assessment of how the needs of special populations are met.

Project/Program: (464 of 500 maximum characters used)

MSUN has an annual evaluation of all academic programs that is conducted throughout Strategic Learning Assessment Plan. Faculty establish student learning outcomes for each program and assess the outcome achievements at the end of each academic year. The persistence, retention and graduation rates of students and programs are assessed. a Student Satisfaction Survey is also conducted that assess the level at which non-traditional student needs are being met.

Final Measurable Outcome: (263 of 500 maximum characters used)

All Student Satisfaction Survey's were completed the first week of May. There is an Assessment Committee that is looking at implementing a new assessment

tool at the beginning of next semester to make the assessment process easier on faculty, staff and students.

Measure: 5P2:Nontraditional Completion

R7 Initiate, improve, expand and modernize quality CTE programs, including relevant technology.

Project/Program: (368 of 500 maximum characters used)

Industry partners keep Northern faculty informed on the latest advancements in technology in the business and industry through regular advisory board meetings. MSUN's CTE programs teach to industry standards and needs and are continually looking for ways to update outdated software and equipment to ensure the course work and labs are relevant to today's industries.

Final Measurable Outcome: 500 of 500 maximum characters used)

Grant funds were used to purchase 12 new patient pumps for nursing.These pumps are what hospitals are requiring students get trained on so they are already knowledgeable when starting their clinical.Plumbing purchased a new hydronic heating equipment that 2nd year students are being certified.Through industry partners, some computer software is able to be kept up-to-date by donation and our programs purchase the other software is bought through program operating budgets, this is getting costly.

Measure: 1P1:Technical Skill Attainment

R8 Provide effective CTE programs that are of sufficient size, scope, and quality to be successful.

Project/Program: (225 of 500 maximum characters used)

MSUN's Diesel Technology Program and Ag. Mechanics program implemented a math tutor in the classroom to increase the level of math the among the CTE students and help implement math into the general classroom and lab setting.

Final Measurable Outcome: (62 of 500 maximum characters used)

The in-class tutor has served 208 students this academic year.

Measure: 5P2:Nontraditional Completion

R9 Provide activities to prepare special populations, including single parents and displaced homemakers who are enrolled in CTE programs, for high skill, high wage, or high demand occupations that will lead to self-sufficiency.

Project/Program: (336 of 500 maximum characters used)

Northern's Student Support Services encourages all special population students to enroll in their program. It offers free 1-on-1 tutoring in ALL subject areas. MSUN encourages their advisory boards and industry partners to "self recruit" in their fields. Women in our CTE programs are highly sought after in their prospective fields.

Final Measurable Outcome: (180 of 500 maximum characters used)

This past academic year Student Support Services helped 240 students. Industry partners are working to establish a recruiting basis to help fill the needs of their industries. 5P2

Measure: 5P1:Nontraditional Participation

If any of the above questions cannot be answered in 500 characters, please attach the response as a Microsoft Word or Adobe PDF document.

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Quarterly Reports Click for Instructions

To the best of your ability, please describe the specific outcomes that resulted from the utilization of Perkins funds in the current grant cycle, addressing each specific project or program identified in that cycle`s local grant application.

: Activity

Project/Program: ([count] of 500 maximum characters used)

Expected Measurable Outcome: ([count] of 500 maximum characters used)

Measure:

If any of the above questions cannot be answered in 500 characters, please attach the response as a Microsoft Word or Adobe PDF document.

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Required Uses of Funds Click for Instructions

Additional Resources

Note: Basic grant funds are divided into two categories: (1) Required uses of funds and (2) Permissible uses of funds. Required uses of funds must be addressed before grant funds may be expended on permissible activities.

Please address how your institution will use Perkins funding in the upcoming grant cycle to meet each of the Perkins Required uses.

R1 Strengthening the academic and career technical skills of students participating in career and technical education (CTE) programs by supporting academic and CTE.

Project/Program: (2483 of 2500 maximum characters used)

MSU-Northern's agriculture technology program consists of a combination of courses in the areas of agri-science, agri-technology and agribusiness. The program, like the critical food and fiber system it serves, is continuously challenged to stay abreast of technologies in agriculture. This project will help the agriculture technology program meet this challenge by providing students with improved, hands-on, modern agriculture technologies that will enhance student learning environments and better prepare them for their future work and careers.The primary agriculture technology to be procured and utilized with this proposal are global positioning system (GPS) receivers. These receivers are unique in that they are equipped with 8MP auto focus cameras, 1080p HD video with LED and flash. In addition, they include topographic maps and WiFi and Bluetooth for communication.These receivers, in addition to geo-positioning, will allow for novel teaching and learning experiences in a number of agriculture technology courses. Here are some examples:a. Ability to allow students to photograph and geo-position stamp various rangeland plants, soils, weeds, insects and other agriculture items related to learning activitiesb. Ability for students to share and review and study, via WiFi and Bluetooth, imagery and video from outdoor lab exercisesc. Ability for instructors to setup outdoor learning labs that students progress through and study using GPS routing, screen photos and companion videos all available on the GPS receiver they are usingd. Ability for students to capture, create, study and present agriculture and natural resource information in a unique and effective mannere. Ability for students to download spatial, photo and video to desktop computers for map creation, analysis and displayf. Ability for instructors to setup spatially guided GPS educational sessions complete with active orienteering directions, audio and video clips and still imagery for selected interest and study pointsThe A.A.S. Degree in agriculture technology at MSUN serves students that are preparing themselves for careers as agriculture producers and for working in agribusiness and as agriculture technicians. These graduates have very good opportunities for employment, as noted in a recent United States Department of Agriculture (USDA) report released in May of 2015. The report showed a very large demand and a strong job market for skilled agriculture program graduates.

Expected Measurable Outcome: (420 of 2500 maximum characters used)

Acquiring these technology devices will help modernize and improve the learning environments of many students in the agricultural technology degree program. All students in AG150-Introduction to Ag Computing, NRSC260-Rangeland Management, AGSC230-Pest Management, ENSC245-Soils, AGSC218-Crop Production and other courses, will have their learning environments enhanced and training on this new technology. Also: 2P1,3P1

Measure: 1P1:Technical Skill Attainment Quarter: Qtr 4:April-June

Project/Program: ([count] of 2500 maximum characters used)

Today, many colleges are not giving welding students the needed shop time hours and practical knowledge that is needed in a good welding employee. MSU-Northern's current classroom arrangement leaves students spending great amounts of time between classes rather than in the welding lab or lecture. Instructors are unable to bring welders and other equipment into classrooms, due to the lack of classroom accessibility. The MSUN welding shop is located three hundred yards from any classroom, making it impossible to flow easily from lecture into lab and impossible for instructors to incorporate equipment into lectures. This possess many great problems: a. Students spending less time in the welding lab = less shop time hoursb. Attendance issuesc. Inability for instructors to bring equipment and tools into the classroom for practical hands on learning. d. Lectures placed after labs, rather than before: Causing safety issues.e. Inability to take struggling students into a classroom.The Welding department is working with MSUN to renovate two small rooms located in the Metals Building, currently used as an office and metal room. We will be taking down the dividing wall and renovate into a classroom, adjoining the welding lab. A classroom in our welding shop building would greatly change many of the issues we are seeing today. Students would spend less time outside of the welding shop, ability to always have lecture before labs, instructors would have the ability to bring equipment and tools into the lecture, and the welding instructors would always have a classroom at their disposal. We believe it would greatly change issues that we are seeing with attendance and tardiness, as well. The MSUN welding department works with very hands on students that loose attention after 15-30 minutes of any lecture. Welding faculty would like the ability to bring hands on equipment to get students out of their chairs to work on equipment, teach the equipment they will be using and working on, in the classroom. Also, instructors would be given the ability to give a 20 minute lecture, have students go into the shop, apply the lecture material immediately, and come back into the classroom. Research shows that these methods would be of great value to the students. The Welding Department will be using Perkins funds to furnish the classroom: tables, chairs, white boards, projector, screen, smart computer.

Expected Measurable Outcome: ([count] of 2500 maximum characters used)

The attendance rate from lecture to lab will increase. Student retention will also maintain if not increase. Also: 1P1, 2P1, 4P1

Measure: 3P1:Student Retention or Transfer Quarter: Qtr 4:April-June

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R2 Linking CTE at the secondary and postsecondary level.

Project/Program: (1399 of 2500 maximum characters used)

Requirements by the grant state that 20% of grant funds must be spent to link secondary and postsecondary CTE. With the grant, Northern will be holding events that bring high school students on campus and gives them a hands on educational experience in high paying, high demand fields. The 1st event is called Pathways Bridge and we hope to hold this event every 2 months. Participants who attend will be introduced to educational pathways leading to lifelong career opportunities in mechanical and agricultural technologies. Students will be guided and taught by MSUN ATDI and Ag. student ambassadors using hands-on skills with millions of dollars' worth of equipment and tools. TekNoXpo is an event that gives introduction to career opportunities in technical fields and university programs that prepare students for them. The event is structured to allow students to pick from three career tracks where they will participate in three different presentation/demonstrations that showcase technologies that are used in technical fields. Industry partners will explain the opportunities, salaries, and benefits that are associated with these careers and program faculty will explain what a course of study for those fields consists of and the preparation they'll need to succeed. Northern will be sending its BSP Coordinator and a high school administrator to the NACEP Conference in Kentucky.

Expected Measurable Outcome: (93 of 2500 maximum characters used)

Serve 4 high schools in the Pathways Bridge Program. Serve at least 220 students at TekNoXpo

Measure: 5P1:Nontraditional Participation Quarter: Qtr 4:April-June

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R3 Provide students with strong experience in and understanding of all aspects of an industry (which may include work-based experiences).

Project/Program: (1105 of 2500 maximum characters used)

Training modules will be built that use new and state of the art combination radiant & domestic hot water heating systems. Plumbing Technology labs here at MSU-Northern has room to permanently house these two new modules. Plumbing is an extremely high demand trade and by building the training modules, would give the students a wider variety of projects that would best simulate the real world of construction. Only by repeating tasks, can the student become proficient at all aspects of the plumbing and heating industry. The increased cost of the plumbing supplies, materials, and appliances are making it difficult to properly stock and supply the labs with the necessary amount of materials. By funding this proposal, each graduate of the plumbing at Northern would have a higher skill and education level that allows them to move seamlessly into the workforce. Northern's Plumbing Technology program would then have the necessary training modules to insure that they are properly trained in advanced plumbing and heating systems. These new modules are expected to last for the next ten years.

Expected Measurable Outcome: (150 of 2500 maximum characters used)

All students who enroll in the MSUN plumbing program will be trained in the and certified in the new heating equipment. Also: 1P1, 2P1, 3P1, 5P1, 5P2

Measure: 4P1:Student Placement Quarter: Qtr 4:April-June

R4 Developing, improving, or expanding the use of technology in CTE (which may include training, STEM initiatives, and collaboration with business and industry.

Project/Program: (1856 of 2500 maximum characters used)

One of the major dynamics to being a good electrical is the ability to troubleshoot an electrical problem. From residential to commercial and event into industrial settings, troubleshooting is one of the most demanding tasks and electrician will face in his career. They have to be able to decipher the problem and then be able to take the steps needed in order to fix the problem.For years, the basic formula for troubleshooting has been the use of multimeters. These meters do the basic functions that every electrician can use in troubleshooting. However, as technology has improved so have the devices that help aid in an electricians ability to locate and solve problems in a quicker and safer manner.Infrared electrical testing is the future of troubleshooting. The infrared electrical meter locates faulty electrical items not generally found during a physical inspection. The infrared electrical meter locates problems before they lead to an unscheduled outage, equipment damage or a fire. Today's electricians are avoiding costly expenses everyday using the infrared meters as an advanced way of troubleshooting. An infrared meter can substantially improve profitability and reduce operating, testing and maintenance costs by offering the following:a.Quickly pinpoints electrical system problemsb.Reduces downtime and electrical equipment damagec.Prevents catastrophic and costly system failuresd.Drastically improves preventive maintenance efficiencye.Can be used while equipment is running to avoid costly shutdownsBy providing the electrical students with the basic understanding and use of these meters, they can be up to date with modern technology and the benefits of the infrared meters. Working hands on in our lab setting they will get the familiarity they will need to be confident at the next level in their trade.

Expected Measurable Outcome: (160 of 2500 maximum characters used)

All students that come into the Electrical Technology Program at MSU-Northern will have extensive hands on training in infrared meters. Also: 1P1, 3P1, 5P1, 5P2

Measure: 4P1:Student Placement Quarter: Qtr 4:April-June

R5 Provide professional development programs to secondary and post-secondary teachers, faculty, administrators, and career guidance and academic counselors who are involved in integrated CTE programs.

Project/Program: (345 of 2500 maximum characters used)

The Big Sky Pathways Coordinator and an administrator from Havre High will be attending the NACEP conference in Louisville, Kentucky. During this five day conference, the two will bring back ways to implement a better partnership between secondary and postsecondary and work hard to increase dual enrollment between the high school and college.

Expected Measurable Outcome: (166 of 2500 maximum characters used)

The two participants will give presentations to high school teachers and administration and to Northern college faculty to encourage collaboration in dual enrollment.

Measure 5P1:Nontraditional Participation Quarter: Qtr 4:April-June

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R6 Develop and implement evaluations of the CTE programs carried out with Perkins funds, including an assessment of how the needs of special populations are met.

Project/Program: (724 of 2500 maximum characters used)

MSUN has an annual evaluation of all academic programs that is conducted throughout Strategic Learning Assessment Plan. Faculty establish student learning outcomes for each program and assess the outcome achievements at the end of each academic year. The persistence, retention and graduation rates of students and programs are assessed. A Student Satisfaction Survey is also conducted that assess the level at which non-traditionally student needs are being met. There is an Assessment Committee that is looking at implementing a new assessment tool at the beginning of next semester to make the assessment process easier on faculty, staff and students. This will help assess programs, program needs and student needs.

Expected Measurable Outcome: (110 of 2500 maximum characters used)

With the new assessment tool Northern hopes to target specifically what the non-traditional student needs are.

Measure: 5P1:Nontraditional Participation Quarter: Qtr 4:April-June

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R7 Initiate, improve, expand and modernize quality CTE programs, including relevant technology.

Project/Program: (2281 of 2500 maximum characters used)

Nursing students have minimal Pediatric clinical opportunities since many critical access hospitals and clinics do not have a pediatric ward or pediatrician in the rural frontier areas. The goal, with funds from this grant, is to increase the number of nursing graduates who will be clinically prepared to safely and accurately provide critical assessment with pediatric trauma, injury and special needs in the rural frontier setting.Simulation in the area of nursing has become an important part of the education of students. Many Universities and Colleges have made recommendations around the use of simulation in healthcare training. In 2015, the National Council of State Boards of Nursing (NCBSN) published results of a comprehensive 2014 study which addressed the use of simulation as a substitute for traditional clinical experience. The result of the study demonstrated that high-quality simulation experiences could be substituted for traditional clinical hours

across the pre-licensure nursing curriculum. The study provided evidence which supports the use of simulation to prepare nursing students to response to health care needs and technical advancements. Simulation has been proven to improve critical thinking, performance of skills, and knowledge acquisition. In addition to developing the cognitive skills, the study found increased confidence, clinical judgment, knowledge, competence, and motor memory skills in the participants. To facilitate the goal, nursing faculty will also need to have the learning opportunities to enhance their level of expertise. Therefore, the faculty members will be prepared to use facilitation methods congruent with simulation objectives/expected outcomes. Utilizing advanced technological simulation modules will provide a means for faculty members to participate in simulating-related professional development such as webinars and direct them to certifications such as certified care simulation educator (CHSE) and to participate in in NLN Sim Leaders/Sigma Theta Tau International (STTI) Nurse Faculty Leadership Academy (NFLA) with a focus of simulation.To build the appropriate pediatric simulation unit at Northern, this will take funding over a number of years to build a department with newborns to teenagers.

Expected Measurable Outcome: 496 of 2500 maximum characters used)

To determine student learning outcomes, two instruments will be used to document: (1) student satisfaction and confidence in using the pediatric simulation modules activity; (2) employer satisfaction with the level of pediatric critical thinking and skills. The National League for Nursing with Laerdal Medical have developed tools for a national study of nursing students and simulation. The Department of Nursing will assess using these instruments or a modified version of these instruments.

Measure: 5P2:Nontraditional Completion Quarter: Qtr 4:April-June

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R8 Provide effective CTE programs that are of sufficient size, scope, and quality to be successful.

Project/Program: (336 of 2500 maximum characters used)

MSU-Northern strives to make a personal based learning environment. Throughout the years, CTE class have grown. One strategy that Northern has implemented was to have a large lecture, up to 50 students, and then break the labs down into 3 separate labs. This way, each student is getting individual attention and help that is needed.

Expected Measurable Outcome: (49 of 2500 maximum characters used)

Northerns CTE lab class size will be kept at 18:1

Measure: 3P1:Student Retention or Transfer Quarter: Qtr 4:April-June

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R9 Provide activities to prepare special populations, including single parents and displaced homemakers who are enrolled in CTE programs, for high skill, high wage, or high demand occupations that will lead to self-sufficiency.

Project/Program: (333 of 2500 maximum characters used)

Northern has to do a better job of presenting high wage/high demand occupations to special population students. This could include looking to put more classes online or offering classes during non-traditional hours. Northern will research nationally-recognized strategies on ways to recruit and sustain special population students.

Expected Measurable Outcome: (56 of 2500 maximum characters used)

Special populations students will increase 1% each year.

Measure: 5P1:Nontraditional Participation Quarter: Qtr 4:April-June

If any of the above questions cannot be answered in 500 characters, please attach the response as a Microsoft Word or Adobe PDF document.

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Permissive Uses of Funds

Click for Instructions

Additional Resources

Note: Basic grant funds are divided into two categories: (1) Required uses of funds and (2) Permissible uses of funds. Required uses of funds must be addressed before grant funds may be expended on permissible activities.

Please only address those permissible activities your institution will be using Perkins funding for in the coming grant cycle.

: Activity

Project/Program: ([count] of 2500 maximum characters used)

Expected Measurable Outcome: ([count] of 2500 maximum characters used)

Measure: Quarter:

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Big Sky Pathways Instructions

A 'Big Sky Pathway' is a Perkins Program of Study designed to smoothly transfer students from high school to success in careers and postsecondary education, incorporating industry recognized credentials and aligning curriculum. This typically includes both academic and CTE/Degree Major Courses, and lead to a credential, certificate, license, or degree.

If your institution has a Big Sky Pathways Coordinator, you may wish to have this person fill out this portion of the application.

Please use the space below to list any Big Sky Pathways that your college plans to develop during this grant cycle:

Cluster Level Program of Study: Manufacturing

Pathway: (18 of 4000 maximum characters used) Welding Technology

High School Name: Hobson High School

Approval Date (mm/dd/yyyy): 04/21/2016

Certifications, Local Articulations, or Dual Credit Classes within the Pathway: (130 of 4000 maximum characters used) This year, Northern will be working to establish dual credit in WLDG110 & WLDG 111; Welding Theory and Welding Theory Practical I.

Cluster Level Program of Study: Manufacturing

Pathway: ([count] of 4000 maximum characters used) Welding Technology

High School Name: Turner High School

Approval Date (mm/dd/yyyy): 02/22/2016

Certifications, Local Articulations, or Dual Credit Classes within the Pathway: ([count] of 4000 maximum characters used) This year, Northern will be working to establish dual credit in WLDG110 & WLDG 111; Welding Theory and Welding Theory Practical I.

Cluster Level Program of Study: Business, Management and Administration

Pathway: ([count] of 4000 maximum characters used) Business Technology

High School Name: Turner High School

Approval Date (mm/dd/yyyy): 02/11/2016

Certifications, Local Articulations, or Dual Credit Classes within the Pathway: ([count] of 4000 maximum characters used) CAPP151 - MS Office, BGEN110 - Applied Business Leadership, ACTG201 - Principles of Financial Accounting, ACTG202 - Principles of Managerial Accounting, SOCI101 - Intro to Sociology, LIT110 - Intro to Literature, LIT223 - British Literature I, LIT224 - British Literature II, LIT230 - World Literature Survey, CAPP120 - Intro to Computers

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Cluster Level Program of Study: Agriculture, Food and Natural Resources

Pathway: ([count] of 4000 maximum characters used) Agricultural Mechanics

High School Name: Melstone High School

Approval Date (mm/dd/yyyy): 01/29/2016

Certifications, Local Articulations, or Dual Credit Classes within the Pathway: ([count] of 4000 maximum characters used) M121 - College Algebra, M111 - Technical Math

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Cluster Level Program of Study: Agriculture, Food and Natural Resources

Pathway: ([count] of 4000 maximum characters used) Agricultural Technology

High School Name: Melstone High School

Approval Date 01/27/2016

(mm/dd/yyyy) 01/27/2016

Certifications, Local Articulations, or Dual Credit Classes within the Pathway ([count] of 4000 maximum characters used)
M121 - College Algebra

Cluster Level Program of Study: Agriculture, Food and Natural Resources

Pathway ([count] of 4000 maximum characters used): Agricultural Technology

High School Name: Moore High School

Approval Date (mm/dd/yyyy): 01/27/2016

Certifications, Local Articulations, or Dual Credit Classes within the Pathway ([count] of 4000 maximum characters used)
M121 - College Algebra

Cluster Level Program of Study: Agriculture, Food and Natural Resources

Pathway ([count] of 4000 maximum characters used): Agricultural Mechanics

High School Name: Moore High School

Approval Date (mm/dd/yyyy): 01/13/2016

Certifications, Local Articulations, or Dual Credit Classes within the Pathway ([count] of 4000 maximum characters used)
M121 - College Algebra, M111 - Technical Math

Cluster Level Program of Study: Agriculture, Food and Natural Resources

Pathway ([count] of 4000 maximum characters used): Agricultural Technology

High School Name: Grass Range High School

Approval Date (mm/dd/yyyy): 01/27/2016

Certifications, Local Articulations, or Dual Credit Classes within the Pathway ([count] of 4000 maximum characters used)
M121 - College Algebra

Cluster Level Program of Study: Agriculture, Food and Natural Resources

Pathway ([count] of 4000 maximum characters used): Agricultural Mechanics

High School Name: Grass Range High School

Approval Date (mm/dd/yyyy): 01/07/2016

Certifications, Local Articulations, or Dual Credit Classes within the Pathway ([count] of 4000 maximum characters used)
M121 - College Algebra, M111 - Technical Math

Cluster Level Program of Study: Agriculture, Food and Natural Resources

Pathway ([count] of 4000 maximum characters used): Agricultural Mechanics

High School Name: Sweet Grass County High School

Approval Date (mm/dd/yyyy):

Certifications, Local Articulations, or Dual Credit Classes within the Pathway

([count] of 4000 maximum characters used)

M121 - College Algebra, M111 - Technical Math

Cluster Level Program of Study: Business, Management and Administration

Pathway

([count] of 4000 maximum characters used)

Business Technology

High School Name: Chinook High School

Approval Date (mm/dd/yyyy):

Certifications, Local Articulations, or Dual Credit Classes within the Pathway

([count] of 4000 maximum characters used)

CAPP151 - MS Office, BGEN110 - Applied Business Leadership, ACTG201 - Principles of Financial Accounting, ACTG202 - Principles of Managerial Accounting, SOCI101 - Intro to Sociology, LIT110 - Intro to Literature, LIT223 - British Literature I, LIT224 - British Literature II, LIT230 - World Literature Survey, CAPP120 - Intro to Computers

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Cluster Level Program of Study: Business, Management and Administration

Pathway

([count] of 4000 maximum characters used)

Business Technology

High School Name: Harlem High School

Approval Date (mm/dd/yyyy):

Certifications, Local Articulations, or Dual Credit Classes within the Pathway

([count] of 4000 maximum characters used)

CAPP151 - MS Office, BGEN110 - Applied Business Leadership, ACTG201 - Principles of Financial Accounting, ACTG202 - Principles of Managerial Accounting, SOCI101 - Intro to Sociology, LIT110 - Intro to Literature, LIT223 - British Literature I, LIT224 - British Literature II, LIT230 - World Literature Survey, CAPP120 - Intro to Computers

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Cluster Level Program of Study: Business, Management and Administration

Pathway

([count] of 4000 maximum characters used)

Business Technology

High School Name: Rocky Boy High School

Approval Date (mm/dd/yyyy):

Certifications, Local Articulations, or Dual Credit Classes within the Pathway

([count] of 4000 maximum characters used)

CAPP151 - MS Office, BGEN110 - Applied Business Leadership, ACTG201 - Principles of Financial Accounting, ACTG202 - Principles of Managerial Accounting, SOCI101 - Intro to Sociology, LIT110 - Intro to Literature, LIT223 - British Literature I, LIT224 - British Literature II, LIT230 - World Literature Survey, CAPP120 - Intro to Computers

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Cluster Level Program of Study: Business, Management and Administration

Pathway

([count] of 4000 maximum characters used)

Business Technology

High School Name: Saco High School

Approval Date (mm/dd/yyyy):

Certifications, Local Articulations, or Dual Credit Classes within the Pathway

([count] of 4000 maximum characters used)

CAPP151 - MS Office, BGEN110 - Applied Business Leadership, ACTG201 - Principles of Financial Accounting, ACTG202 - Principles of Managerial Accounting, SOCI101 - Intro to Sociology, LIT110 - Intro to Literature, LIT223 - British Literature I, LIT224 - British Literature II, LIT230 - World Literature Survey, CAPP120 - Intro to Computers

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Cluster Level Program of Study: Manufacturing

Pathway

([count] of 4000 maximum characters used)

Welding Technology

High School Name: Fergus High School

Approval Date (mm/dd/yyyy):

Certifications,

Local Articulations, or Dual Credit Classes within the Pathway

([count] of 4000 maximum characters used)

This year, Northern will be working to establish dual credit in WLDG110 & WLDG 111; Welding Theory and Welding Theory Practical I.

Cluster Level Program of Study: Agriculture, Food and Natural Resources

Pathway

([count] of 4000 maximum characters used)

Agricultural Mechanics

High School Name: C.M. Russell High School

Approval Date (mm/dd/yyyy):

Certifications, Local Articulations, or Dual Credit Classes within the Pathway

([count] of 4000 maximum characters used)

M121 - College Algebra, M111 - Technical Math

Performance Level - Summary (Read Only)

This page displays a summary of your Performance Level indicators as compared to indicator data at the state level. This data has been pre-populated with information from the State CAR Report Card for the current reporting cycle.

Performance Area	State Negotiated Performance Level	90% Threshold	Previously Reported Performance	Improvement Plan Required
1P1 - Technical Skill Attainment	75.00	67.50	100.00	No
2P1 - Credential, Certificate or Diploma	57.00	51.30	70.00	No
3P1 - Student Retention or Transfer	71.79	64.61	83.00	No
4P1 - Student Placement	77.00	69.30	78.00	No
5P1 - Nontraditional Participation	16.00	14.40	10.00	Yes
5P2 - Nontraditional Completion	13.00	11.70	12.00	No

1P1 Technical Skill Attainment Click for Instructions

The State Negotiated Performance Level (SNPL) threshold target for 1P1 Technical Skill Attainment for this year is: 75.00 %

Your previous year's reported performance was: 100.00 %

Please review the performance indicators for your institution listed above, as compared with the state negotiated performance levels. As part of the legislative requirements associated with Section 113 of the Carl D. Perkins Career and Technical Education Act of 2006, a sub-recipient that does not meet 90% of the established goal for any performance measure must create and implement an improvement plan in the program year following the year of the deficiency.

If any one of your institution`s indicators failed to meet at least 90% of an agreed upon state negotiated level of performance, an improvement plan must be provided.

Did you meet or exceed the state performance level?

(•) Yes (No other information is required) ( ) No (Local Improvement Plan for Indicator 1P1)

2P1 Credential, Certificate or Diploma Click for Instructions

The State Negotiated Performance Level (SNPL) threshold target for 2P1 Credential, Certificate or Diploma for this year is: 57.00 %

Your previous year's reported performance was: 70.00 %

Please review the performance indicators for your institution listed above, as compared with the state negotiated performance levels. As part of the legislative requirements associated with Section 113 of the Carl D. Perkins Career and Technical Education Act of 2006, a sub-recipient that does not meet 90% of the established goal for any performance measure must create and implement an improvement plan in the program year following the year of the deficiency.

If any one of your institution`s indicators failed to meet at least 90% of an agreed upon state negotiated level of performance, an improvement plan must be provided.

Did you meet or exceed the state performance level?

- (●) Yes (No other information is required)
- ( ) No (Local Improvement Plan for Indicator 2P1)

3P1 Student Retention or Transfer Click for Instructions

The State Negotiated Performance Level (SNPL) threshold target for 3P1 Student Retention or Transfer for this year is: 71.79 %

Your previous year's reported performance was: 83.00 %

Please review the performance indicators for your institution listed above, as compared with the state negotiated performance levels. As part of the legislative requirements associated with Section 113 of the Carl D. Perkins Career and Technical Education Act of 2006, a sub-recipient that does not meet 90% of the established goal for any performance measure must create and implement an improvement plan in the program year following the year of the deficiency.

If any one of your institution`s indicators failed to meet at least 90% of an agreed upon state negotiated level of performance, an improvement plan must be provided.

Did you meet or exceed the state performance level?

- (●) Yes (No other information is required)
- ( ) No (Local Improvement Plan for Indicator 3P1)

4P1 Student Placement Click for Instructions

The State Negotiated Performance Level (SNPL) threshold target for 4P1 Student Placement for this year is: 77.00 %

Your previous year's reported performance was: 78.00 %

Please review the performance indicators for your institution listed above, as compared with the state negotiated performance levels. As part of the legislative requirements associated with Section 113 of the Carl D. Perkins Career and Technical Education Act of 2006, a sub-recipient that does not meet 90% of the established goal for any performance measure must create and implement an improvement plan in the program year following the year of the deficiency.

If any one of your institution`s indicators failed to meet at least 90% of an agreed upon state negotiated level of performance, an improvement plan must be provided.

Did you meet or exceed the state performance level?

- (●) Yes (No other information is required)
- ( ) No (Local Improvement Plan for Indicator 4P1)

5P1 Nontraditional Participation Click for Instructions

The State Negotiated Performance Level (SNPL) threshold target for 5P1 Nontraditional Participation for this year is: 16.00 %

Your previous year's reported performance was: 10.00 %

Please review the performance indicators for your institution listed above, as compared with the state negotiated performance levels. As part of the legislative requirements associated with Section 113 of the Carl D. Perkins Career and Technical Education Act of 2006, a sub-recipient that does not meet 90% of the established goal for any performance measure must create and implement an improvement plan in the program year following the year of the deficiency.

If any one of your institution`s indicators failed to meet at least 90% of an agreed upon state negotiated level of performance, an improvement plan must be provided.

Did you meet or exceed the state performance level?

○ Yes (No other information is required) ◉ No (Local Improvement Plan for Indicator 5P1)

Briefly describe the details, strategies, and activities you will implement this year to improve this performance level. (115 of 2000 maximum characters used)

Northern will research nationally-recognized strategies on ways to recruit and sustain special population students.

Assigned To: Holly

Date to be completed by: 3/1/17

5P2 Nontraditional Completion Click for Instructions

The State Negotiated Performance Level (SNPL) threshold target for 5P2 Nontraditional Completion for this year is: 13.00 %

Your previous year's reported performance was: 12.00 %

Please review the performance indicators for your institution listed above, as compared with the state negotiated performance levels. As part of the legislative requirements associated with Section 113 of the Carl D. Perkins Career and Technical Education Act of 2006, a sub-recipient that does not meet 90% of the established goal for any performance measure must create and implement an improvement plan in the program year following the year of the deficiency.

If any one of your institution`s indicators failed to meet at least 90% of an agreed upon state negotiated level of performance, an improvement plan must be provided.

Did you meet or exceed the state performance level?

- (●) Yes (No other information is required)
- ( ) No (Local Improvement Plan for Indicator 5P2)

Consortium Click for Instructions

Federal law states that you must meet a minimum individual allocation of $50,000 to qualify for Perkins funding. If an institution is unable to meet these requirements, they may form a consortium between multiple institutions in order to meet the qualifications.

Applicants wishing to form consortiums should focus on the development of objectives and achievement of goals within Perkins programs that are beneficial to all consortium partners. Joint projects and professional development are required. Consortium partners will meet throughout the year to jointly plan, develop strategies, disseminate information and evaluate continuous improvement practices.

If applicable, please list below the postsecondary institutions requesting to form a consortium, designating the first institution as the lead:

Postsecondary Member

Please answer the following questions as they pertain to the upcoming grant cycle:

1. Please describe the mutual programs, goals, and objectives of the institutions participating in the consortium. ([count] of 2000 maximum characters used)
2. How will the partners of the consortium work together throughout the upcoming grant cycle to achieve and implement the mutual objectives and goals? ([count] of 2000 maximum characters used)
3. Please outline plans for at least one joint professional development project, one joint project activity, and at least 3 meetings in the upcoming grant cycle (dates may be tentative). ([count] of 2000 maximum characters used)

Program Advisory Committees

It is recommended that Programs of Study utilizing Perkins funding utilize Program Advisory Committees including both academic and industry professionals.

Please enter the following information regarding Program Advisory Committees that represent **Perkins programs you will be spending funds on during this fiscal year.**

Program of Study	Agriculture, Food and Natural Resources		
Pathway	Agriculture Technology & Agriculture Mechanics		
Current Program Advisory Committee Members	William Danley	Larry Strizich	
	Thomas Welch	Holly Haas	
	Steve Don	Jeremy Hofman	Quarter
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) (100 of 500 maximum characters used)	Advisory Board Meeting - last years got moved to spring. This year will more than likely be spring.		Qtr 3:January-March
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) (111 of 500 maximum characters used)	Ag. Mechanics faculty member sits on the Diesel Advisory board that meets in the fall and spring of every year.		Qtr 4:April-June
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) (0 of 500 maximum characters used)			

Program of Study	Business, Management and Administration		
Pathway	Business Administration		
Current Program Advisory Committee Members	Lanny Wilke	Byron Ophus	
	Heather Thompson	Barbara Zuck	
	Rodney Ridenour	Larry Strizich	Quarter
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) ([count] of 500 maximum characters used)	Our Business Advisory Board tries to meet briefly at least once per week every semester.		Qtr 4:April-June
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) ([count] of 500 maximum characters used)			
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) ([count] of 500 maximum characters used)			

Program of Study	Manufacturing		
Pathway	Welding Technology		
Current Program Advisory Committee Members	Tom Spika	Robert Anderson	
	Chuck Terry	Holly Haas	
	Larry Strizich	Carissa Brown	Quarter
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) ([count] of 500 maximum characters used)	Meetings are usually in the fall. May have to be moved to spring as the lead faculty will be on leave in the fall.		Qtr 3:January-March
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) ([count] of 500 maximum characters used)			
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) ([count] of 500 maximum characters used)			

Program of Study	Manufacturing
Pathway	Plumbing Technology

Current Program Advisory Committee Members	Bob Mack	Mark S. Maki	
	Bob Nault	Darrell Holzer	
	Mike Waldenburg	Lorren Schlotfeldt	Quarter
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) ([count] of 500 maximum characters used)	Advisory Board Meeting - Spring 2017		Qtr 4:April-June
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) ([count] of 500 maximum characters used)			
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) ([count] of 500 maximum characters used)			

Program of Study	Health Science		
Pathway	Nursing		
Current Program Advisory Committee Members	Arlys Williams	Deliliah Duffy	
	Sherry Kegel	Danielle Golie	
	Mary Pappas	Valerie Ridgeway	Quarter
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) ([count] of 500 maximum characters used)	Advisory Board Meetings - The advisory board was very successful with having monthly meetings. If all members agree they will continue with this format.		Qtr 4:April-June
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) ([count] of 500 maximum characters used)			
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) ([count] of 500 maximum characters used)			

Program of Study	Manufacturing		
Pathway	Electrical Technology		
Current Program Advisory Committee Members	Darrell Holzer	Tom Letellier	
	Dave Rhines	Mark Maki	
	Jody Sanchez	Jim Sands	Quarter
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) ([count] of 500 maximum characters used)	Advisory Board Meeting- Fall 2016		Qtr 2:October-December
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) ([count] of 500 maximum characters used)			
Planned Meetings/Events for Current Fiscal Yr (dates do not have to be final) ([count] of 500 maximum characters used)			

Additional Comments Click for Instructions

Date of Comment (mm/dd/yyyy)

Add any additional comments you have for Perkins Postsecondary in the space below. Please indicate the specific page(s) you are referencing in your comments. ([count] of 2000 maximum characters used)

Any supporting documentation should be uploaded to OCHE using the File Upload process below. Such documentation (if required), can be submitted upon the initial submission of this application. If the OCHE Office requests further documentation, this File Upload process is the location where such files should be attached to your application for OCHE review.

If you have uploaded any files for OCHE review, please provide a brief description of the contents of each file. ([count] of 4000 maximum characters used)

Please upload supporting information files. Allowable file types are Microsoft Word (.doc/.docx) and Adobe PDF. Files must be less than 3MB in size and the file name should not include special characters (i.e. #, $, % etc.). Attempting to upload a file that does not comply with these restrictions will result in errors and loss of unsaved data.

Choose File no file selected

Uploaded Files:

No files are currently uploaded for this page.

Allocations

Click for Instructions

	Perkins-PS
Current Year Funds	
Allocation	**$52,976**
ReAllocated (+)	$0
Released (-)	$0
Total Current Year Funds	$52,976
Prior Year(s) Funds	
Carryover (+)	$0
ReAllocated (+)	$0
Total Prior Year(s) Funds	$0
Sub Total	**$52,976**
Multi-District	
Transfer In (+)	$0
Transfer Out (-)	$0
Administrative Agent	
Adjusted Sub Total	**$52,976**
Total Available for Budgeting	**$52,976**
	Perkins-PS

Funding Distribution BUDGET BREAKDOWN (Use whole dollars only. Omit Decimal Places, e.g., 2536)

Click for Instructions

Total Allocation Available for Budgeting: $52,976

Description of Expenditure Codes

Description of Required and Permissive Uses of Funds

Administration

199 -
Administrative costs

Federal guidelines state that no more than 5% of project funds can go to administration and indirect costs.
The maximum allowed for the institution is $2,649.

Describe proposed administrative costs here (if any) (maximum length is 1000 characters)

Amount $0

Project Summary Number 1

(Max 2500 characters) Count (0 of 2500)

One of the major dynamics to being a good electrical is the ability to troubleshoot an electrical problem. From residential to commercial and event into industrial settings, troubleshooting is one of the most demanding tasks and electrician will face in his career. They have to be able to decipher the problem and then be able to take the steps needed in order to fix the problem.For years, the basic formula for troubleshooting has been the use of multimeter's. These meters do the basic functions that every electrician can use in troubleshooting. However, as technology has improved so have the devices that help aid in an electricians ability to locate and solve problems in a quicker and safer manner.Infrared electrical testing is the future of troubleshooting. The infrared electrical meter locates faulty electrical items not generally found during a physical inspection. The infrared electrical meter locates problems before they lead to an unscheduled outage, equipment damage or a fire. Todays electricians are avoiding costly expenses everyday using the infrared meters as an advanced way of troubleshooting. An infrared meter can substantially improve profitability and reduce operating, testing and maintenance costs by offering the following:a.Quickly pinpoints electrical system problemsb.Reduces downtime and electrical equipment damagec.Prevents catastrophic and costly system failuresd.Drastically improves preventive maintenance efficiencye.Can be used while equipment is running to avoid costly shutdownsBy providing the electrical students with the basic understanding and use of these meters, they can be up to date with modern technology and the benefits of the infrared meters. Working hands on in our lab setting they will get the familiarity they will need to be confident at the next level in their trade.

List which required and/or permissive uses of funds will support this project.

R1, R3, R4, R7, R8, R9

Exp. Code	Line Item Detail Description	Expenditure Amount	Delete Row
224-Minor Equipment	20 TG165 ExTech Flir Imaging Infrared Thermometer @ $330	6600	
		0	
		0	
	SubTotal:	$6,600	

Project Summary Number 2

(Max 2500 characters) Count (0 of 2500)

MSU-Northern's agriculture technology program consists of a combination of courses in the areas of agri-science, agri-technology and agribusiness. The program, like the critical food and fiber system it serves, is continuously challenged to stay abreast of technologies in agriculture. This project will help the agriculture technology program meet this challenge by providing students with improved, hands-on, modern agriculture technologies that will enhance student learning environments and better prepare them for their future work and careers.The primary agriculture technology to be procured and utilized with this proposal are global positioning system (GPS) receivers. These receivers are unique in that they are equipped with 8MP auto focus cameras, 1080p HD video with LED and flash. In addition, they include topographic maps and WiFi and Bluetooth for communication.These receivers, in addition to geo-positioning, will allow for novel teaching and learning experiences in a number of agriculture technology courses. Here are some examples:a. Ability to allow students to photograph and geo-position stamp various rangeland plants, soils, weeds, insects and other agriculture items related to learning activitiesb. Ability for students to share and review and study, via WiFi and Bluetooth, imagery and video from outdoor lab exercisesc. Ability for instructors to setup outdoor learning labs that students progress through and study using GPS routing, screen photos and companion videos all available on the GPS receiver they are usingd. Ability for students to capture, create, study and present agriculture and natural resource information in a unique and effective mannere. Ability for students to download spatial, photo and video to desktop computers for map creation, analysis and displayf. Ability for instructors to setup spatially guided GPS educational sessions complete with active orienteering directions, audio and video clips and still imagery for selected interest and study pointsThe A.A.S. Degree in agriculture technology at MSUN serves students that are preparing themselves for careers as agriculture producers and for working in agribusiness and as agriculture technicians. These graduates have very good opportunities for employment, as noted in a recent United States Department of Agriculture (USDA) report released in May of 2015. The report showed a very large demand and a strong job market for skilled agriculture program graduates.

List which required and/or permissive uses of funds will support this project.

R4, R7, P7

Exp. Code	Line Item Detail Description	Expenditure Amount	Delete Row
224-Minor Equipment	Garmin Monterra GPS 10 @ $700	7000	
224-Minor Equipment	Garmin Carrying Case 10 @ $10	100	
224-Minor Equipment	32GB Micro SD Cards 10 @ $15	150	
224-Minor Equipment	MapSource Topo 24K on MicroSD - Software	80	
		0	

		0	
	SubTotal:	$7,330	

Project Summary Number 3

(Max 2500 characters) Count (0 of 2500)

Today, many colleges are not giving welding students the needed shop time hours and practical knowledge that is needed in a good welding employee. MSU-Northerns current classroom arrangement leaves students spending great amounts of time between classes rather than in the welding lab or lecture. Instructors are unable to bring welders and other equipment into classrooms, due to the lack of classroom accessibility. The MSUN welding shop is located three hundred yards from any classroom, making it impossible to flow easily from lecture into lab and impossible for instructors to incorporate equipment into lectures. This possess many great problems: Students spending less time in the welding lab = less shop time hoursAttendance issuesInability for instructors to bring equipment and tools into the classroom for practical hands on learning. Lectures placed after labs, rather than before: Causing safety issues.Inability to take struggling students into a classroom.The Welding department is working with MSUN to renovate two small rooms located in the Metals Building, currently used as an office and metal room. We will be taking down the dividing wall and renovate into a classroom, adjoining the welding lab. A classroom in our welding shop building would greatly change many of the issues we are seeing today. Students would spend less time outside of the welding shop, ability to always have lecture before labs, instructors would have the ability to bring equipment and tools into the lecture, and the welding instructors would always have a classroom at their disposal. We believe it would greatly change issues that we are seeing with attendance and tardiness, as well. The MSUN welding department works with very hands on students that loose attention after 15-30 minutes of any lecture. Welding faculty would like the ability to bring hands on equipment to get students out of their chairs to work on equipment, teach the equipment they will be using and working on, in the classroom. Also, instructors would be given the ability to give a 20 minute lecture, have students go into the shop, apply the lecture material immediately, and come back into the classroom. Research shows that these methods would be of great value to the students. The Welding Department will be using Perkins funds to furnish the classroom for 20 students: tables, chairs, white boards, projector, screen, smart computer.

List which required and/or permissive uses of funds will support this project.

R1, R7, R8, R9

Exp. Code	Line Item Detail Description	Expenditure Amount	Delete Row
224-Minor Equipment	Projector and projector screen	500	
224-Minor Equipment	Smart computer/classroom	2967	
224-Minor Equipment	2 White boards @ $160	320	
224-Minor Equipment	10 tables @ $330	3300	
224-Minor Equipment	20 chairs @ $60	1200	
224-Minor Equipment	Computer Station	550	
		0	
		0	
		0	
	SubTotal:	$8,837	

Project Summary Number 4

(Max 2500 characters) Count (0 of 2500)

Requirements by the grant state that 20% of grant funds must be spent to link secondary and postsecondary CTE. With the grant, Northern will be holding events that bring high school students on campus and gives them a hands on educational experience in high paying, high demand fields. The 1st event is called Pathways Bridge and we hope to hold this event every 2 months. Participants who attend will be introduced to educational pathways leading to lifelong career opportunities in mechanical and agricultural technologies. Students will be guided and taught by MSUN ATDI and Ag. student ambassadors using hands-on skills with millions of dollars' worth of equipment and tools. TekNoXpo is an event that gives introduction to career opportunities in technical fields and university programs that prepare students for them. The event is structured to allow students to pick from three career tracks where they will participate in three different presentation/demonstrations that showcase technologies that are used in technical fields. Industry partners will explain the opportunities, salaries, and benefits that are associated with these careers and program faculty will explain what a course of study for those fields consists of and the preparation they'll need to succeed. Northern will be sending its BSP Coordinator and a high school administrator to the NACEP Conference in Kentucky. During this five day conference, the two will bring back ways to implement a better partnership between secondary and postsecondary and work hard to increase dual enrollment between the high school and college. Northern will also send a faculty member to the National ACTE conference.

List which required and/or permissive uses of funds will support this project.

R2, R5, R9

Exp. Code	Line Item Detail Description	Expenditure Amount	Delete Row
220-Consumable Supplies	High School TekNoXpo Event - supplies for hands on events, $1000; Fuel for semi's for transportation of equipment and fuel for equipment rodeo, $1600;	2600	
220-Consumable Supplies	Northern Bridges High Schools to College Events (4) @ $250 - pencils, name tags, safety glasses, ear plugs	1000	
400-Travel	2016 NACEP Conference in Louisville, Kentucky for 2 people: Flights $1,600; Hotel $1,440; Food (Per state per diem) $460; Ground transportation $120, Shuttle $120, Luggage $100 - based on state and federal rates when applicable	3840	
400-Travel	Northern Faculty to National ACTE Conference in Las Vegas, NV; Flight $350, Hotel $400, Food $230 (Per state per diem), Ground Transportation $120, Shuttle $60, Luggage $50 - based on state and federal rates when applicable	1210	
401-Registration and Training	National ACTE Conference Registration	600	
401-Registration and Training	NACEP Conference Registration for 2 people	1000	
401-Registration and Training	NACEP Membership Registration	160	

401-Registration and Training	ACTE Membership Registration	450	
800-Other Expenditures	Booth at MTACTE	500	
		0	
		0	
		0	
	SubTotal:	$11,360	

Project Summary Number 5

(Max 2500 characters) Count (0 of 2500)

Nursing students have minimal Pediatric clinical opportunities since many critical access hospitals and clinics do not have a pediatric ward or pediatrician in the rural frontier areas. The goal, with funds from this grant, is to increase the number of nursing graduates who will be clinically prepared to safely and accurately provide critical assessment with pediatric trauma, injury and special needs in the rural frontier setting.Simulation in the area of nursing has become an important part of the education of students. Many Universities and Colleges have made recommendations around the use of simulation in health care training. In 2015, the National Council of State Boards of Nursing (NCBSN) published results of a comprehensive 2014 study which addressed the use of simulation as a substitute for traditional clinical experience. The result of the study demonstrated that high-quality simulation experiences could be substituted for traditional clinical hours across the pre-licensure nursing curriculum. The study provided evidence which supports the use of simulation to prepare nursing students to response to health care needs and technical advancements. Simulation has been proven to improve critical thinking, performance of skills, and knowledge acquisition. In addition to developing the cognitive skills, the study found increased confidence, clinical judgment, knowledge, competence, and motor memory skills in the participants.

List which required and/or permissive uses of funds will support this project.

R1, R3, R4, R5, R6, R7, R8, R9

Exp. Code	Line Item Detail Description	Expenditure Amount	Delete Row
224-Minor Equipment	Newborn Anne Simbaby	2150	
224-Minor Equipment	6 Month Old Nursing SimBaby	6750	
		0	
	SubTotal:	$8,900	

Project Summary Number 6

(Max 2500 characters) Count (0 of 2500)

Training modules will be built that use new and state of the art combination radiant & domestic hot water heating systems. Plumbing Technology labs here at MSU-Northern has room to permanently house these two new modules. Plumbing is an extremely high demand trade and by building the training modules, would give the students a wider variety of projects that would best simulate the real world of construction. Only by repeating tasks, can the student become proficient at all aspects of the plumbing and heating industry. The increased cost of the plumbing supplies, materials, and appliances are making it difficult to properly stock and supply the labs with the necessary amount of materials. By funding this proposal, each graduate of the plumbing at Northern would have a higher skill and education level that allows them to move seamlessly into the workforce. Northern's Plumbing Technology program would then have the necessary training modules to insure that they are properly trained in advanced plumbing and heating systems. This is an ongoing process. These new modules are expected to last for the next ten years.

List which required and/or permissive uses of funds will support this project.

R1, R3, R4, R7, R8

Exp. Code	Line Item Detail Description	Expenditure Amount	Delete Row
224-Minor Equipment	Navien Combo combination radiant & domestic hot water heating system w/ supplies - lab training module	3000	
224-Minor Equipment	Triangle Tube Combo hydronic heating systems w/ supplies - lab training module	4300	
		0	
	SubTotal:	$7,300	

Project Summary Number 7

(Max 2500 characters) Count (0 of 2500)

Please enter description of this project here...

List which required and/or permissive uses of funds will support this project.

Exp. Code	Line Item Detail Description	Expenditure Amount	Delete Row
		0	
		0	
		0	
	SubTotal:	$0	

	Totals:	$50,327

Determining Maximum Indirect Cost allowed

(A) Total Allocation Available for Budgeting	$52,976	(F) Total budgeted above	$50,327
(B) Budgeted Property and Equipment Cost (Exp code 500)	$0	(G) Budgeted Indirect Cost	2649
(C) Allowable Direct Costs (A-B)	$52,976	(H) Total Budget (F+G)	$52,976
(D)			
(E) Maximum Indirect Cost (C*(D/1+D))	$2,998	Allocation Remaining (A-H)	$0

Calculate Totals

Budget Summary Rollup

Click for Instructions

2017 Annual Allocation for grant year beginning 7/1/2016 - 6/30/2017

Exp Code	Line Item Detail Description	Amount
	Subtotal Personnel Services:	*$0*
Exp Code	**Line Item Detail Description**	**Amount**
220-Consumable Supplies	High School TekNoXpo Event - supplies for hands on events, $1000; Fuel for semi's for transportation of equipment and fuel for equipment rodeo, $1600;	$2,600
220-Consumable Supplies	Northern Bridges High Schools to College Events (4) @ $250 - pencils, name tags, safety glasses, ear plugs	$1,000
224-Minor Equipment	20 TG165 ExTech Flir Imaging Infrared Thermometer @ $330	$6,600
224-Minor Equipment	Garmin Monterra GPS 10 @ $700	$7,000
224-Minor Equipment	Projector and projector screen	$500
224-Minor Equipment	Smart computer/classroom	$2,967
224-Minor Equipment	Newborn Anne Simbaby	$2,150
224-Minor Equipment	6 Month Old Nursing SimBaby	$6,750
224-Minor Equipment	Navien Combo combination radiant & domestic hot water heating system w/ supplies - lab training module	$3,000
224-Minor Equipment	Triangle Tube Combo hydronic heating systems w/ supplies - lab training module	$4,300
224-Minor Equipment	2 White boards @ $160	$320
224-Minor Equipment	10 tables @ $330	$3,300
224-Minor Equipment	20 chairs @ $60	$1,200
224-Minor Equipment	Garmin Carrying Case 10 @ $10	$100
224-Minor Equipment	32GB Micro SD Cards 10 @ $15	$150
224-Minor Equipment	Computer Station	$550
224-Minor Equipment	MapSource Topo 24K on MicroSD - Software	$80
	Subtotal Operating Expenses:	*$42,567*
Exp Code	**Line Item Detail Description**	**Amount**
	Subtotal Communications:	*$0*
Exp Code	**Line Item Detail Description**	**Amount**
400-Travel	2016 NACEP Conference in Louisville, Kentucky for 2 people: Flights $1,600; Hotel $1,440; Food (Per state per diem) $460; Ground transportation $120, Shuttle $120, Luggage $100 - based on state and federal rates when applicable	$3,840
400-Travel	Northern Faculty to National ACTE Conference in Las Vegas, NV; Flight $350, Hotel $400, Food $230 (Per state per diem), Ground Transportation $120, Shuttle $60, Luggage $50 - based on state and federal rates when applicable	$1,210
401-Registration and Training	National ACTE Conference Registration	$600
401-Registration and Training	NACEP Conference Registration for 2 people	$1,000
401-Registration and Training	NACEP Membership Registration	$160
401-Registration and Training	ACTE Membership Registration	$450
	Subtotal Travel:	*$7,260*
Exp Code	**Line Item Detail Description**	**Amount**
800-Other Expenditures	Booth at MTACTE	$500
	Subtotal Other Expenditures:	*$500*
	Total Direct Costs:	$50,327
	Total Indirect Costs:	$2,649
Exp Code	**Line Item Detail Description**	**Amount**
	Subtotal Major Equipment:	*$0*
	Total Grant Funds:	$52,976

Program Assurances: Carl D. Perkins Vocational and Technical Education Click for Instructions

☑ By checking this box and saving the page, the applicant hereby certifies that he/she has read, understood and will comply with the assurances listed below.

The applicant will comply with the requirements of P.L. 109-270 (the Carl D. Perkins Career and Technical Education IV Act of 2006) and all applicable federal and state rules and regulations, including timely reporting of fiscal and programmatic data. In particular, Carl Perkins funds will be used to supplement, and in no case supplant, state or local funds.

The applicant assures the Montana Board of Regents that services provided under the approved application will be provided in accordance with P.L. 109-270, and will not discriminate or violate provisions of the Title IX of the Education Amendments of 1972, Title VI of the Civil Rights Act of 1964, or Section 504 of the Rehabilitation Act of 1973, or Title II of the Americans with Disabilities Act of 1990.

The applicant certifies that they have read and will comply with the requirements of the Certification Regarding Lobbying & the Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion (Lower Tier Covered Transactions) at Section 1352, Title 31 of the U.S. Code, (implemented at 34 CFR Part 82, Sections 82.105 and 82.110).

The Applicant certifies that they have read and will comply with the applicable requirements of OMB Circular A-102, including the Assurances of Non-Construction Programs available in SF-424b (OMB Control No:0348-0040).

The applicant certifies that the detailed budget and budget narrative submitted are correct and complete for the purposes set forth in the application documents. The activities proposed for funding have met the parameters for Required Use; and Permissible Use of funding for the purposes of Section 135 of P.L. 109-270.

The applicant certifies that they will follow all laws and regulations affecting federal programs as outlined in the OMB circulars which apply to your type of institution and outlined in Education Department General Administrative Regulations (EDGAR) URLS, http://www.ed.gov/policy/fund/reg/edgarReg/edgar.html

The applicant certifies that they understand that all payments made under this program are subject to CMIA requirements and the requirements in Part 80 of EDGAR. Recipients must use grant funds only for obligations incurred during the funding period.

The applicant certifies that they understand that if their institution expends $500,000 or more in federal awards during the fiscal year, you are required to have an audit in accordance with OMB Circular A133.Information about a133 audits

The applicant certifies that it will retain all financial records, supporting documents, statistical records and all other records pertinent to an award for which federal funds are received for a period of three years from submission of the final expenditures report for which the funds are used or until such time greater than three years as all pending reviews or audits have been completed and resolved.

The assurances were fully agreed to on this date: 5/16/2016

Amendment Description Click for Instructions

This page is not applicable to the Original Application

Application History (Read Only)

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Status Change	UserId	Action Date
Final Application Review	WilliamsA	06-28-2016
Submitted to OCHE	HaasH	06-14-2016
Returned for Changes	WilliamsA	06-13-2016
Submitted to OCHE	HaasH	05-16-2016