INSTITUTION  |  PROJECT/REQUEST  |  LOCATION
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Bemidji State University | Engineering Technology | Bemidji

$2,500,000

**Project at a Glance**

- Design degrees in applied engineering technology and manufacturing engineering technology
- Connect education, industry and economic development agencies to build rural economies and enhance quality of life, create a regional identity for northern Minnesota as the “Ingenuity Frontier” and serve as a national model for rural development
- Collaborate with high schools, 12 two-year institutions of higher education, two four-year higher education institutions, plus state and regional economic development groups and multiple industries in developing the projects. Education, industry and economic development agencies will work together to build rural economies, enhance the region’s quality of life, create an identity for northern Minnesota as the “Ingenuity Frontier” and serve as a model for rural development nationally.

**Project Description**

This project is designed to prepare university graduates to apply scientific and engineering knowledge to technical manufacturing processes and to help companies in northern Minnesota improve their production processes and remain competitive.

Bemidji State University, in collaboration with numerous other organizations, will design two degrees: an online bachelor’s degree in applied engineering technology and a bachelor’s degree in manufacturing engineering technology for students based on campus.

The university will work with high schools, 12 two-year institutions of higher education and two four-year higher education institutions, plus state and regional economic development groups and multiple industries in developing the projects. Education, industry and economic development agencies will work together to build rural economies, enhance the region’s quality of life, create an identity for northern Minnesota as the “Ingenuity Frontier” and serve as a model for rural development nationally.

This project will result in graduates who connect the engineer/scientist and the technical and production workforce. Curriculum will be delivered through distance learning and will include skill sets identified through focus groups and interviews at multiple sites across northern Minnesota.

An Applied Research Center for Manufacturing will complement the program. The center will host industry professionals working alongside professors and students to create new manufacturing processes, develop new products and test those processes and products. The center will be a showcase for applied research and development for Minnesota, featuring Internet-based manufacturing processes, tabletop technology, 3-D holographic imagery and other advanced and emerging technologies.

The online applied engineering technology degree will be an interdisciplinary program combining scientific and technical course work with non-technical studies. It will articulate with two-year technical degrees in various areas and from a variety of two-year institutions. The program will develop uniquely qualified individuals capable of functioning in fields such as communications, telecommunications, industrial management, operations management, procurement, sourcing, logistics management and public administration.

Higher levels of math and science will be emphasized in local high schools if information about engineering-related opportunities is communicated successfully across the region. Bemidji State University will partner
with Project Lead the Way to promote pre-engineering programs in middle and high schools.

The bachelor of applied science program will be benchmarked against applied engineering programs at Drexel University in Philadelphia and Cal Poly Pomona, Calif. Also, agreements will be drafted to share knowledge, projects and expertise among all three institutions.

If this project is successful, an increased pool of highly skilled workers will be available to industry, and manufacturers in northern Minnesota will continue to be innovative and able to compete in the world marketplace. Services to the rural communities will follow, reversing the current out-migration and encouraging industry to remain and expand in rural Minnesota.

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**Project Collaborators**
- Arctic Cat
- Polaris
- TEAM Industries
- Marvin Windows
- Digi-Key
- Reptron
- ASV
- Headwaters Regional

**Development Center Participants**
- Minnesota Department of Employment & Economic Development
- Northwest Minnesota Foundation
- Minnesota Technologies Inc.
- Alexandria Technical College
- Central Lakes College
- Hennepin Technical College
- Minnesota State Community & Technical College
- Northeast Higher Education District
- Northland Community & Technical College
- Northwest Technical College at Bemidji
- Pine Technical College
- South Central Technical College
- Drexel University
- Cal-Poly Pomona

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