

# Northern Michigan's Mobile CNC Digital FAB LAB

Providing CNC training at public schools, private companies, Michigan Works and higher education institutions throughout Emmet, Charlevoix, Cheboygan & Antrim counties.

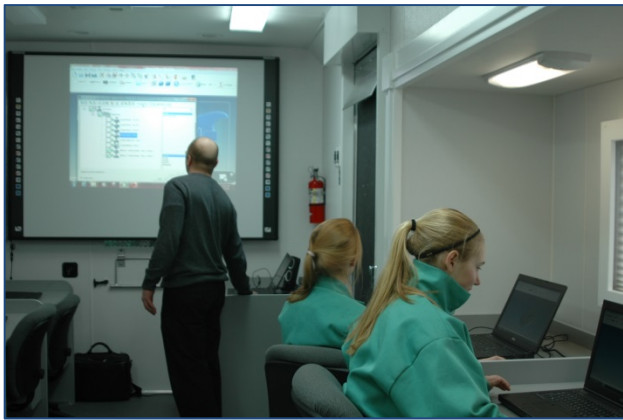
To sign up for training or for more information contact [FabLab@ncmich.edu](mailto:FabLab@ncmich.edu) or Tom Erhart (NLEA) at [tom@northernlakes.net](mailto:tom@northernlakes.net)



44' Self Contained Mobile Training Trailer



2 Slide Outs Provide Additional Classroom Space



CAD/CAM Software



CNC Lathe



CNC Mill



12 Computer Stations, Instructor Station w/Smartboard

**Thank you to our Manufacturing Advisory Team members:** North Central Michigan College, Northern Lakes Economic Alliance, Precision Edge Surgical Products, Charlevoix County, Michigan Economic Development Corporation, Char-Em ISD, ACAT Global LLC, Moeller Aerospace Technology Inc., Industrial Magnetics, Inc., EJ, Central Lake Public Schools, Pellston Public Schools, East Jordan Public Schools, Little Traverse Bay Band of Odawa Indians, Northwest Michigan Works! **Logos of all participating organizations & businesses are shown on page 4...**

# Northern Michigan's Mobile CNC Digital training FAB LAB

## The Need

Through retention visits to manufacturers and consultation with growth companies, Northern Lakes Economic Alliance (NLEA) learned about the urgent need manufacturers in the northern Lower Peninsula of Michigan have for trained Computer Numerical Control (CNC) machine tool operators and programmers. In response to that need, NLEA in partnership with North Central Michigan College (NCMC), Char-Em Intermediate Schools, Precision Edge Surgical Products, Michigan Economic Development Corporation, Charlevoix County Board of Commissioners, Northwest Michigan Works and numerous manufacturers, has developed a solution.. Business expansion is assured if the manufacturers can identify and hire employees with these skills.

## Project Description.

In response to this critical need, a 2 year journey began, led by NLEA, to acquire a self-contained Mobile Digital CNC Training Lab. NLEA staff heard about a new Mobile Manufacturing Lab operating in Wisconsin and arranged to visit the program. Upon return, the assembled a group of business, educational, community & government leaders set out to determine how we could have such a wonderful and needed resource in Northern Michigan.

Funding became the greatest challenge for this project. The region's MEDC business development manager and project packager stepped forward with a solution to fund the Mobile Lab. Collaboratively, an application was submitted for a \$350,000 CDBG grant to Precision Edge Surgical Products in Boyne City, based on their addition of employees. Precision Edge has pledged to forward all of these funds to North Central Michigan College, to reimburse them for the purchase of the Mobile CNC training lab (a.k.a. "The FAB LAB). North Central Michigan College will own and operate the Mobile Training Lab with oversight and management by a Manufacturing Advisory Team comprised of business, educational and government leaders.

***Designed to address work force training needs the mobile CNC lab approaches the solution with both a short term and long term solution.*** Short term – companies can have immediate access to vital CNC training right in their parking lots. This saves money and time as companies can work with the instructor on specific training needs and rotate employees right from shifts, rather than have them travel long distances for similar training. Long term – with the mobile CNC lab used in area high schools and colleges, this will fill the pipelines in the future with people with the skills needed to work in today's high tech manufacturing companies.

Our "FAB LAB" includes 13 state-of-the-art computer stations with CAD/CAM programs, as well as a CNC controlled mill and lathe. This mobile unit will be transported to area manufacturers and schools, in order to train both incumbent workers and high-school/ college students in CNC skills. Training received through this lab will coincide with local manufacturers' needs and lead to the student receiving a nationally recognized certificate in CNC.

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Curriculum, developed to use for this program, consists of offering CNC 1 and CNC 2 levels of certification. Completing CNC 1 level training will qualify the student for an entry level CNC position. Completing CNC 2 level training will lead to a nationally recognized CNC certification and will qualify them for a more advanced higher paid CNC position. Both high school students and NCMC/Ferris State University students will be eligible for training in the lab.

In addition to this training, incumbent workers at local manufacturing firms and Michigan Works clients will be able to take specialized CNC training based on the exact needs of the employer and the skill level of the participants. By being able to bring the training lab to the place of employment, the workers can take part in the training with less time away from work. The employer will be able to participate in and guide the training along with the instructors. The Mobile Digital FAB LAB will cost effectively deliver CNC training throughout our region, avoiding the need to equip and staff multiple “brick and mortar” facilities.

Another advantage of having our Mobile Digital FAB LAB is that it can be used as a marketing tool to attract students to Manufacturing. Being able to bring the training lab right to individual schools and community events, by offering tours and open houses to students, parents and community members, will be a powerful way to market this program. Students and parents will be able to see that a career in modern manufacturing provides high-tech high-paying jobs in a very clean environment .

This concept can serve as a model for delivering CNC fabrication training and marketing to other regions throughout the state of Michigan, allowing the state to promote Michigan, as “the place” to locate and expand manufacturing businesses because the skilled workers necessary for modern manufacturing are available.

# Businesses & Organizations Participating in the Mobile CNC Training “FAB LAB” Project



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