



## ENERGY ACADEMY QUESTIONNAIRE

### 1. What would your costs be to run an Energy Academy in a state-of-the-art classroom/lab area?

#### a. Classroom upgrade costs

Because the program is a four-year program with the first two years requiring one-hour blocks of time, the first two years would be offered at Michigan City High School. (We anticipate working with the other high schools that feed into La Porte County Career and Technical Education Programs at the A.K. Smith Career Center to ensure their students are also prepared.) Classroom space is available for the freshman- and sophomore-level programs at MCHS, and we have two classroom spaces available at the A.K. Smith Career Center to run the junior- and senior-level programs. Construction Technology students would complete any needed cosmetic refurbishment of these classrooms. We have had our Technology Department review the spaces, and they believe the infrastructure is ready for implementation. WiFi is available for use with classroom laptops, and a document camera and 3-D printer are in place. The only cost would be for classroom furniture, which would be:

Tables:	\$3,600.00	Source: MCAS Capital Projects Fund
Chairs:	\$1,080.00	Source: MCAS Capital Projects Fund

#### b. Laptops for each student

Cost of high-end computers required to run Project Lead the Way Software and electronics software:

20 computers @ \$800.00:	\$16,000.00	Source: Perkins Funds
Computer Docking Cart	\$2,500.00	Source: Perkins Funds
Large Screen Monitor	\$1,115.00	Source: Perkins Funds

**c. Equipment and materials**

There would be no cost for initial equipment, as we believe we have all that is necessary within existing programs. The estimated materials cost, based on the initial program levels is:

<b>NCCER Introductory Craft Skills:</b>	Textbook @ \$52.00/40	\$2,080.00
	Instructor @ \$49.00/2	\$98.00
	Power Point Supplement	\$40.00
	OSHA 10 certification	\$600.00

**CEWD Energy Industry Fundamentals Certificate**

CEWD Application Fee	\$50.00
CEWD Assessment Fee	\$1,200.00

**NCCER Introduction to the Power Industry**

Textbook @ \$22.00/40	\$880.00
Instructor@ \$22.00/1	\$22.00
PowerPoint	\$25.00

**NCCER Alternative Energy**

Textbook@ \$65.00/40	\$2,600.00
Instructor@ \$65.00/1	\$65.00
PowerPoint	\$40.00

**NCCER Electrical 1**

Textbook@ \$67.00/40	\$2,680.00
Instructor@ \$65.00/1	\$65.00
PowerPoint	<u>\$40.00</u>

<b>Total Instructional Materials</b>	<b>\$10,485.00</b>
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Textbook costs would be absorbed through the textbook account and recovered through textbook rental.

**d. Will an additional teacher need to be hired?**

Based on the educational requirements noted for each of the levels in the “West Florida HS model,” our present staff holds the necessary credentials required to teach the courses. (Note: We have already re-aligned our Project Lead the Way staff for next school year, as our enrollment numbers for PLTW have increased.)

**e. Transportation costs for Field trips**

Michigan City Area Schools will cover the cost of all local field trips through Transportation funds. Field trips that would be relatively local would be:

Michigan City Generating Station (Michigan City, IN)  
 NIPSCO Training Center  
 LNG Plant  
 Benton County Wind Farm (Benton County, IN)  
 Cook Nuclear Plant (Bridgman, MI)  
 Winn Industries (Michigan City)  
 BioTown (Reynolds, IN)  
 Wade Plant (Purdue University)

**f. Other costs**

NCCER Site Accreditation	\$1,995.00
(This could potentially run through the Assn. of Builders and Contractors in Indianapolis)	
NCCER Master Instructor Training	\$595.00
NCCER Administrator Certification Training	\$295.00

**2. Please provide an estimate of your annual operating costs for this Academy, after Year 1.**

Estimated costs for an incoming class size of 40 students:

OSHA 10 Certification	\$600.00
CEWD Assessment	\$1,200.00
NCCER Assessment	No Cost if Accredited

**3. Please describe your school district's experience with Project Lead the Way, and any other STEM related programs.**

For the past three years, MCAS has been developing a K-12 pathway centered on STEM – raising both teacher capacity and student interest/achievement in math and science. Business/community and university partners (including Purdue University North Central, Ivy Tech, and the University of Illinois) have moved beyond workshops and volunteer hours to collaborative, sustained relationships. The result: STEM program options for families, a new approach to teacher training, rising test scores (most notably in Algebra and Science) and a tripling of post-secondary dual credits. Our programs and students are attracting notice; we have been honored at regional and state levels for our initiatives.

STEM Programs/Options for Michigan City students currently include:

- **A STEM Elementary Magnet School (Lake Hills)** – the only public STEM magnet school in Indiana, Lake Hills serves students in grades K-5. Lake Hills is one of only 44 schools nationwide that has been selected to pilot the elementary Project Lead the Way curriculum in 2013-14. Lake Hills maintains a close partnership with Purdue University North Central that involves Math, Physics, and Education faculty and students. Next fall it will partner with Ivy Tech in the “IvySci: STEM Outreach project,” in which Ivy Tech staff will work with students on the Indiana standards as they relate to STEM concepts and the school’s quarterly themes. Students will visit the Ivy Tech Campus for STEM related activities and to promote awareness of post-secondary programs and career opportunities.
- **A STEM Middle School (Barker Middle School).** The curriculum at Barker includes 9 modules of Project Lead the Way’s Gateway to Engineering for all students (grades 6-8), along with electives in Problem-Based Technology and Digital Art. All students take part in a STEM Fair and other STEM enrichment activities.
- **An Environmental Science Middle School (Krueger Middle School).** Coursework includes Environmental Science, Environmental Technology, and Advanced Technology for grades 6-8, and Environmental Science is infused in Wellness and Arts classes. Indiana Coastal Grants have supported a six-phase transformation of Krueger’s campus into an outdoor environmental science center, including a two-mile bird habitat trail, a one-mile forest management trail, a wetlands area, a savanna prairie, a rain garden, and a butterfly habitat. The school has numerous partners, including the Michigan City Forestry Dept. and Indiana Dept. of Natural Resources, and is a field trip site for elementary students in the region.
- **Project Lead the Way at Michigan City High School.** The Project Lead the Way curriculum at the high school currently includes: Intro to Engineering Design, Principles of Engineering, Digital Electronics, and Principles of Biomedical Science. By the 2014-15 school year, Human Body Systems and Civil Engineering and Architecture will also be added. Other STEM-related coursework includes a range of math and science offerings, including Honors, AP and dual-credit courses in STEM subjects. Extra-curricular STEM activities include Math and Science Bowl, Science Olympiad, FIRST Robotics, EnviroThon, and others; these teams have been successful at regional, state, and national levels. MCHS plans to add an Early College program for students within the next year.
- **STEM Programs at LaPorte County Career and Technical Education (A. K. Smith Career Center).** STEM pathways housed at the A. K. Smith Center include Electronics & Computer Technology, Advanced Manufacturing, a Health Careers Academy,

Welding Technology (which received Indiana's CTE Award of Excellence in 2013), Construction Technology, and Automotive Technology. Each of these programs currently offers industry certifications as well as dual-credit opportunities through Ivy Tech Community College, Vincennes University, and/or Purdue University North Central. Students participate in the SkillsUSA program, and have been successful at regional and state competitions.

**4. Do you currently have available teaching staff to teach an Energy Academy, beginning in Fall 2014?**

**a. If so, what are your teacher's qualifications?**

At Michigan City High School, we have two teachers currently certified in the areas of Introduction to Engineering Design, Principles of Engineering, and Digital Electronics. In addition, we have a teacher licensed in Physics who could teach the Energy Industry Fundamentals and a teacher licensed in Technology Education who could teach Introductory Craft skills. At the A.K. Smith Career Center, we have a teacher who is licensed in Technology Education for Electronics as well as areas within the PLTW curriculum.

**b. If not, what funding do you anticipate having available to hire additional staff?**

N/A

**5. Please explain the Marketing methods you would use to recruit students into an Energy Academy?**

Marketing will be key to the success of the Energy Academy. Marketing efforts would be aimed at raising awareness among both students and parents, beginning at the elementary level, and would be most intensely focused at the crucial 8th grade year when students are deciding on high school pathways. It could also tie in with Early College program recruitment efforts. Marketing methods would include:

- Personal meetings with counselors, Energy Academy instructors, and other staff
- Tours of Academy classrooms/facilities
- Brochures/flyers/posters outlining the program, curricula, and pathways
- Social Media – short videos/posts by students, for students
- Announcements in local media (radio, print, online)

When the Energy Academy is launched/announced, a public awareness campaign would be conducted – including press releases to local and regional media (radio, TV, print), as well as articles on websites and social media. Ongoing news releases highlighting Energy Academy

activities, student accomplishments, etc. will increase awareness among students, parents, community, and prospective employers.

The Michigan City Economic Development Corporation has also committed to assisting with marketing and awareness initiatives for La Porte County CTE Programs, including a potential Energy Academy. Their efforts will include exhibits at events attended by students and community (such as the Back to School Rally, Made in La Porte County Expo, County Fair, and other major events) in addition to a social media campaign.

Presently, there is a La Porte County Career and Technical Education (LPCCTE) overview brochure that is distributed to all students in La Porte County that identifies all of the programs available through LPCCTE. Each program pathway also has a one-page color flyer that identifies the careers available and the actual pathway plan itself. *(A sample of the overview brochure and one of the program flyers is attached to the end of this document.)*

We would also plan to leverage existing career/technical promotional materials for Energy programs. For example, the NCCER (National Center for Construction Education Research) offers a wide range of free marketing resources on their website – posters, flyers, brochures, and much more.

**6. Are you willing and able to contribute financially to the total funding to make an Energy Academy successful in your school?**

Yes. Examples include using our General Fund to pay teacher salary and benefits, using Capital Projects funds to prepare and maintain classrooms/equipment, and using Transportation funds for field trips. We also recognize that successful college and career preparation programs incorporate strong external relationships, including fiscal and in-kind resources from both business and post-secondary partners.

**7. Are you willing to seek any additional funding sources to meet any gaps in your school's Plan?**

**a. Perkins Career and Technical Education funds**

As a member of Area Vocational District 6, we currently receive Perkins Funding. This program would become a part of the overall Perkins objectives for La Porte County Career and Technical Education.

**b. Community Foundations**

The Unity Foundation of La Porte County manages several charitable funds that could likely support our efforts, including the Chamber of Commerce's Education Foundation

Fund. Additional financial support could be sought from the Michigan City Enrichment Corporation to provide seed money and/or funds for special projects.

**c. Federal grants, as they may apply.**

We have previously received funds from the U.S. Department of Education through Senator Donnelly, to support Career and Technical Education. Currently MCAS receives funding from the Indiana Department of Education through a Math and Science Partnership Grant and an Innovation Grant, which is funding the Michigan City High School Freshman Academy. We will research grant opportunities with the National Science Foundation. We have researched the possibility of other Energy grants that are available and would like to partner with NiSource to pursue these types of grants related to Energy Education and STEM. Indiana High Ability Grant funding can be used to assist us with professional development, classroom materials, and potentially assessments. We would continue to seek both Federal and State grant opportunities as they arise.

**8. Could an Energy Academy be conducted at either your High School or your Career Center? Please specify one, or both.**

Both. The Energy Academy Capstone Program would become a La Porte County Career and Technical Education Program offered at the A.K. Smith Career Center in Michigan City. The introductory level (9<sup>th</sup> and 10<sup>th</sup> grade) courses would be housed at Michigan City High School. We would also work with other high schools in La Porte County that send students to our Career Center, encouraging them to offer introductory courses as well.

**EXECUTIVE SUMMARY: Please provide a summary of why you believe your school district is best positioned to implement a successful pilot Energy Academy. Please limit your Summary to 1000 words, or less.**

Michigan City Area Schools is uniquely positioned to implement a successful Energy Academy. Here's why:

**1. We have a vision.**

We share the vision with U.S Secretary of Education Arne Duncan and Indiana Governor Mike Pence that an educated workforce is key to economic growth for our region, state, and nation. With a focus on college and career success, we have created a pathway aligned with the Indiana College and Career Pathways and the Common Core Standards. There is a natural flow of STEM curricula aligned with the pathway that will excite students about opportunities in Energy at an early age.

Through elementary and middle school magnet and theme programs, we engage students in career exploration. At the high school level, as we embed the Indiana College and Career Pathways, we will add the Energy Pathway as an option under the Architecture and Construction Pathway. Construction Technology and Electronics are two capstone classes already in place. Our transition to the Energy Pathway will be seamless. We can be up and running as a model for others in a short time as part of our current vision.

Implementing the NCCER Core curriculum, Introductory Craft Skills, Energy Industry Fundamentals, and PLTW courses will prepare students for numerous career opportunities. The program would meet dual-credit and industry based certification requirements embedded in the pathways. Partnership discussions have already taken place with Ivy Tech and Vincennes University, and we will also engage Purdue North Central.

**2. As the provider for both Career and Technical Education and Adult Education for La Porte County, we have a broad reach and access to shared resources.**

With the La Porte County Career and Technical Education Program and La Porte County Adult Education in the same facility, we can meet both immediate and long-term employment needs for NiSource and other energy employers. We currently house a welding program for WorkIN, providing welding instruction and certification to adults working on their GEDs. The NCCER curriculum can be an adult learning program as well, which would afford a similar program opportunity in Energy. Adult learners, displaced workers, or unemployed individuals could become NCCER or CEWD certified, and with additional training through NiSource or Ivy Tech could become skilled, entry-level workers.

**3. We have a proven commitment to STEM.**

Over the past three years, MCAS has created a feeder system of students prepared for jobs in STEM. We offer the only public elementary STEM magnet school in Indiana, along with two themed middle schools (STEM and Environmental Science). We also have initiated a pathway for STEM at our high school/Career and Technical Education Center that ultimately leads to post-secondary studies in scientific and technical fields. This K-12, aligned approach is transforming the roles of our teachers, university faculty and students, and community and corporate partners.

In addition to our STEM schools and programs, we have a number of enrichment opportunities in place for STEM, including a successful FIRST Robotics program and after-school and mentoring projects centered on STEM.

Please see our response to Question #3 above for a listing of the programs in place at the elementary, middle, and high school levels.

#### **4. Our geographic location is optimal.**

MCAS is ideally situated on the shores of Lake Michigan; oil and gas pipelines, generating stations, a nuclear power plant, wind farms, rail lines, alternative energy production centers, and more are within a 70-mile radius. We also have capacity for future growth: Wind, solar and water projects could all take place on school corporation property.

#### **5. We are a district on the move!**

MCAS has made great strides over the past three years. Despite a high poverty rate (73% free/reduced lunch), graduation rates have increased 7%, test scores are on the rise (ISTEP+ scores have increased 11% in Math, 15% in Language Arts). Over the same three-year period, our Career and Technical Education Center increased enrollment by 130, adding three CTE program pathways.

We have set our goals high, and we are changing the public perception of our schools. State Superintendent of Public Instruction Glenda Ritz and U. S. Secretary of Education Arne Duncan have both visited Lake Hills STEM Magnet – and have pointed to the success of our STEM initiatives and community partnerships as key to our turnaround.

Awards we have received for our STEM programs include the Indiana CTE Award of Excellence (Welding); the La Porte County Convention & Visitors Bureau “Green Award”; the La Porte County Soil/Water Conservation School of the Year (Krueger); and the Friends of Shirley Heinze “Bringing Home Nature Award.” Lake Hills and our FIRST Robotics Team were inducted into the Northwest Indiana Society of Innovators, and our STEM and environmental science programs have received numerous grants to support their work.

#### **6. We have broad support for our efforts.**

Our community has rallied around our efforts in STEM and Career and Technical Education. Among the institutions currently partnering with our schools on STEM are:

The City of Michigan City  
Christopher Burke Engineering  
Department of Natural Resources  
Environmental Protection Agency  
Indiana Dunes National Lakeshore  
Indiana Dunes State Park  
Indiana University Northwest  
International Friendship Gardens  
Ivy Tech Community College

The Field Museum (Chicago)  
Lake County Extension Service  
La Porte County Historical Society  
La Porte County Master Gardeners  
La Porte County Parks Department  
La Porte County Solid Waste District  
Lubeznik Center for the Arts  
Michiana Humane Society  
Michigan City Fire and Police

Michigan City Historical Society  
Michigan City Port Authority  
Porter County Parks Department  
Potawatomi Audubon Society

Purdue University North Central  
Save the Dunes  
Shirley Heinze Land Trust  
U. S. Coast Guard

(Note: This is a partial list. We have many other partners... particularly our CTE supporters and advisors!)

We are confident our partners and others will support us in the Energy Academy initiative. Following are letters of support from our Mayor, Economic Development Corp. President, Chamber President, and Career and Tech Advisory Board Chair.

**Please visit the link below for additional supporting documentation, including news clippings and a more in-depth overview of the curricula, partnerships, and future plans of our STEM-focused elementary and middle schools:**

**<http://EducateMC.net/EnergyAcademyProposal>**



OFFICE OF THE MAYOR  
CITY OF MICHIGAN CITY

RON MEER  
MAYOR

June 28, 2013

Kris Emaus  
NiSource, Manager, Training  
2755 Raystone Dr.  
Valparaiso, IN 46385

Dear Ms. Emaus:

Please accept this letter as an endorsement of the Michigan City Area Schools/LaPorte County Career and Technical Education Program proposal for an Energy Academy. Workforce development is a key priority for Michigan City; we are committed to training and retaining our best and brightest. To do this, we must prepare our youth for high wage, high demand jobs – jobs in fields such as the energy industry.

Over the past few years, Michigan City Area Schools has undergone a transformation, focusing on an alignment of Science, Technology, Engineering and Math, from kindergarten through high school. Career and Technical Education and Adult Education programs are also helping us ensure we will have the human capital necessary to maintain a climate attractive for economic development and growth.

Michigan City is a community rich in natural and human resources, ideally situated for a focus on energy careers. With the Michigan City Generating Station on our lakefront, we have maintained a strong partnership with NIPSCO, working together on a number of initiatives. I hope you will give serious consideration to establishing an Energy Academy here.

Sincerely,

Ron Meer, Mayor  
City of Michigan City



June 27, 2013

Mr. Kris Emaus - Manager, Training  
NiSource  
2755 Raystone Dr.  
Valparaiso, IN 46385

Dear Ms. Emaus:

I am writing in support of the Michigan City Area Schools and LaPorte County Career and Technical Education Program proposal for an Energy Academy.

As you are no doubt aware, the energy industry is already experiencing a need for skilled workers in a variety of capacities, from entry level to highly qualified positions. This need is projected to grow significantly in Northwest Indiana over the next decade, as current workers retire from the profession.

The Energy Academy concept would be extremely beneficial to economic development in Michigan City, LaPorte County, and the entire Northwest Indiana region. Graduates of this program would be qualified for entry-level positions, not only with major energy companies in our region (such as NiSource, Indiana Michigan Power, REMC) but also with a number of mid-size employers seeking skilled employees in STEM, manufacturing, and transportation/logistics.

The EDCMC maintains an ongoing dialog with the Michigan City Area Schools, the LaPorte County Career and Technical Education program, and the LaPorte County Adult Education Program, and we are committed to supporting their work as they prepare students for careers in the energy industry.

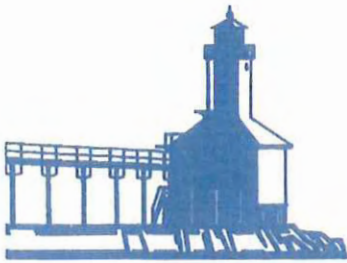
We are excited about the possibility of assisting in the promotion and development of an Energy Academy for our high school and adult learners.

Please feel free to contact me if you need additional information.

Sincerely,

A handwritten signature in blue ink that reads "Chuck Compton".

Chuck Compton - Chairman of the Board of Directors  
Economic Development Corporation of Michigan City, IN  
Two Cadence Park Plaza  
Michigan City, IN 46360  
ccompton@anacostia.com | (219) 874-9000 x210



## Michigan City Area Chamber of Commerce

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June 27, 2013

Kris Emaus  
Manager, Training  
NiSource  
2755 Raystone Dr.  
Valparaiso, IN 46385

Dear Ms. Emaus:

The Michigan City Area Chamber of Commerce wholeheartedly endorses the Michigan City Area Schools/LaPorte County Career and Technical Education Program proposal to establish an Energy Academy in Michigan City.

Our Chamber is committed to supporting our members, including NIPSCO, in their efforts to train and retain a highly qualified workforce. We are also committed to a continued partnership with leaders of our public schools, higher education institutions, and Career and Technical Education programs as we work together to prepare area students for success in high-demand technical and STEM fields.

Our local schools and our Career and Technical Education programs are already positioning themselves as leaders in our region in pre-engineering, environmental science, and other technical areas such as Welding, Electronics, and Computer Technology. An Energy Academy would complement these initiatives in a meaningful way, preparing both high school students and adult learners for careers in the growing field of energy and renewable resources.

Please let me know if there is anything our Chamber can do to assist in moving the Energy Academy project forward. We believe it has the potential to make a tremendous difference for our community and region.

Sincerely,

Ann Dahm  
President  
Michigan City Area Chamber of Commerce



**LA PORTE COUNTY CAREER  
& TECHNICAL EDUCATION**  
A. K. SMITH CAREER CENTER

**817 Lafayette Street • Michigan City, IN 46360**

**Phone: (219) 873-2120 • Fax: (219) 873-2068 • Web: EducateMC.net**  
**June 26, 2013**

Kris Emaus  
Manager, Training  
NiSource  
2755 Raystone Dr.  
Valparaiso, IN 46385

Dear Ms. Emaus:

The LaPorte County Career and Technical Education General Advisory Committee strongly supports the establishment of an Energy Academy in Michigan City, at the A. K. Smith Career Center and at Michigan City High School.

Our Committee, which is comprised of 16 leaders in area business, industry, and education, convenes on a monthly basis. An important aspect of our work is to identify workforce needs – and to ensure that our career and technical education programs align to meet those needs.

We believe that an Energy Academy would build upon our current programs in Electronics/Computer Technology and Project Lead the Way. We would expand these programs to create the Energy Academy, which would serve as capstone for students in STEM and Environmental Science pathways in the Michigan City Area Schools and at the five other LaPorte County high schools that feed into our Career and Technical Education center.

The industry certifications and dual credit opportunities this program would offer would position graduates to pursue a broad range of careers in demand regionally, in both STEM and manufacturing.

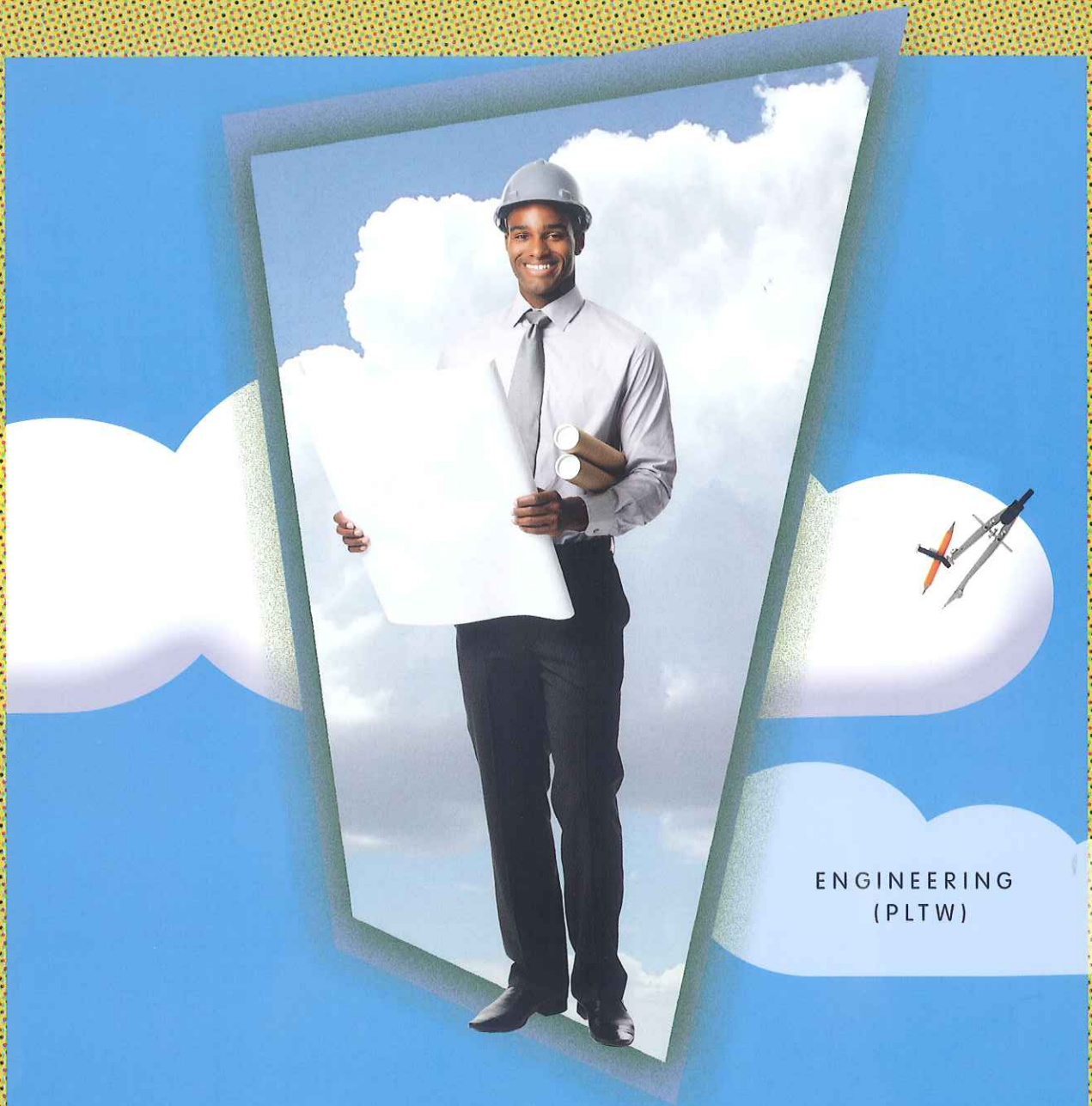
We maintain a strong partnership with both Ivy Tech and a number of trade apprenticeship programs, including IBEW, which would support our efforts. We anticipate these partners could provide a number of valuable internship and job shadowing opportunities, in addition to those that might be provided through NiSource.

Thank you for your consideration of this proposal.

Sincerely,

Chuck Oberlie  
LaPorte County CTE General Advisory Committee

**LaPorte County Career & Technical Education...Your Door to the Future!**



ENGINEERING  
(PLTW)

# YOUR DOOR TO THE FUTURE



LA PORTE COUNTY CAREER  
& TECHNICAL EDUCATION

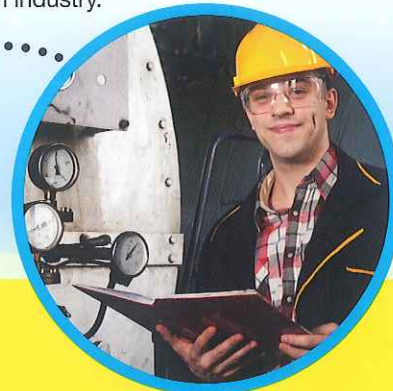
A.K. SMITH CAREER CENTER

# Engineering (PLTW)

There is a critical shortage of engineers and engineering technologists.



There is a critical shortage of engineers and engineering technologists entering the field at a time when technology is reinventing itself every few years. Of students who enter engineering programs at the college level, only 50% complete their engineering degree. The Engineering Courses in Career and Technical Education provides students with the opportunity to explore the world of engineering and engineering technology while gaining valuable skills that transfer to any career. The courses offered at MCHS, combined with traditional math and science courses, introduce students to the scope, rigor and discipline of engineering and engineering technology prior to entering college. Students receive training in current technology using the latest computer software and equipment used in industry. Students also participate in hands-on activities that utilize team efforts.



## INDIANA COLLEGE AND CAREER PATHWAY PLAN – STATE MODEL

Career Cluster: **MANUFACTURING** Pathway: **ENGINEERING**

**Core 40 with Honors High School Graduation Plan:** This is a SAMPLE plan for schools to use in planning.

Course sequences and grade level in which courses are offered may vary according to local policies, practices and resources.

Students should enroll in Indiana Career Explorer, complete interest inventories, and investigate careers in clusters and pathways prior to or during the time they create their individual Pathway Plans.

## S E C O N D A R Y

YR	English/ Language Arts	Math	Science	Health/PE Social Studies	CTE/Career Preparation Courses for this Pathway		Additional Elective Courses
9	English 9	Algebra I	Biology	Health & Wellness/ Physical Ed.	** Introduction to Engineering Design	Preparing for College & Careers	Computer Applications Personal Financial Responsibility World Language
10	English 10	Geometry	Chemistry	Geography/History of the World or World History/Civilization	** Principles of Engineering		World Language
11	English 11	Algebra II	3rd Core 40 Science	US History	** CHOOSE ONE OF THE THREE FOLLOWING COURSES: Civil Engineering & Architecture; Computer Integrated Manufacturing; Digital Electronics; Biotechnical Engineering; Aerospace Engineering		World Language
12	English 12	Math or Quantitative Reasoning		Government Economics	Engineering Design and Development		Fine Arts

**State specified Pathway Assessments:** National ECA

**Industry Recognized Certification:** Autodesk Inventor Certified User, Autodesk Inventor Certified Associate, Autodesk Inventor Certified Professional

## P O S T S E C O N D A R Y

### Courses Aligned for Potential Dual Credit \*\*

\*\* See individual Course Frameworks for alignment of high school course standards and postsecondary course objectives

#### Ivy Tech Community College

- ADMF 103 - Graphic Communications for Manufacturing OR
- DESN 102 - Technical Graphics
- ADMF 115 - Materials & Processes for Manufacturing
- ADMF 113 - Electrical & Processes for Manufacturing
- ADMF 116 - Automation & Robotics in Manufacturing I
- DESN 105 - Architectural Design I

#### Vincennes University

- ELEC 130 - Digital Logic I
- CIMT 125/ 125L - Intro. to Robotics/ Automation with Lab
- ARCH 221 - Advanced Architectural Software Applications

#### PNC credits in progress

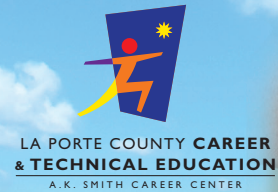
FROM THE  
**DIRECTOR**

With passion and purpose, the experienced instructors and dedicated staff of the A.K. Smith Career Center provide La Porte County high school students with meaningful opportunities to achieve their goals. Here, students learn from professionals in their fields as they explore career options, build a work ethic, prepare for life in a global economy and, in many cases, earn industry certifications and college credit.

Regardless of which program of study they pursue, our students engage in a rigorous curriculum and gain a broad academic knowledge base. We deliver hands-on classroom experience in each career path as well as job shadowing and internships. Many students juggle their regular high school extracurricular activities with Career Center studies, giving them yet another taste of life in the busy working world.

I invite you to visit our Center for a tour. Ask questions, and find out more about how we help each one of our students open the door to the future!

**Audra Peterson**  
Director  
La Porte County Career & Technical Education  
A.K. Smith Career Center



# 11 INNOVATIVE PROGRAMS

designed to open  
your door to the **FUTURE**

## Explore Career Options

Whether you plan to continue your education, pursue an apprenticeship, or enter the workforce, the A.K. Smith Career Center can help you reach your goals. We offer training, know-how, and hands-on experience that allow you to make informed decisions about your future!

## Earn High School Credits

Students can earn up to six high school elective credits each year by taking Career and Technical Education classes. Ask your school counselor for details!

## Earn College Credits

Many classes at the A.K. Smith Career Center also give students opportunities to earn college credit while still in high school. Post-secondary institutions currently offering credits to our students include IVY Tech Community College, Lake Michigan College, Purdue University Calumet, Purdue University North Central, and Vincennes University.

Each program offered at the  
A.K. Smith Career Center provides students with  
hands-on experience, in classrooms using  
state-of-the-art equipment. Our instructors  
give students the skills they need to  
succeed, in the following disciplines:

- Advanced Manufacturing Technology
- Automotive Services Technology
- Construction Technology
- Cosmetology
- Criminal Justice & Law
- Culinary Arts Academy
- Early Childhood Education
- Electronics and Computer Technology
- Facility Maintenance
- Health Careers Academy
- Welding Technology



## Open your door to the future TODAY!

Visit the A.K. Smith Career Center during an open house or make an appointment for a personal tour. You'll meet students who have already made the choice to be better prepared for life after high school!

Enrollment forms for the A.K. Smith Career Center are available from your guidance counselor. Don't wait! Reserve your spot in a Career and Technical Education class today—and open your door to the future.

**La Porte County Career & Technical Education**  
**A.K. Smith Career Center**  
817 Lafayette Street  
Michigan City, IN 46360  
(219) 873-2120

## And there's MORE!

In addition to courses offered at the A.K. Smith Career Center, many Career & Technical opportunities are offered at your La Porte County high school. Ask your guidance counselor for more information on the following courses:

**LaCrosse High School**  
Agricultural Science • Natural Resource Management

**La Porte High School**  
Business Technology • Construction Technology  
Engineering • Interdisciplinary Cooperative Education (ICE)  
Marketing

**Michigan City High School**  
Agricultural Science • Natural Resource Management  
Business Technology • Education & Early Childhood Careers  
Engineering • Interdisciplinary Cooperative Education (ICE)  
Marketing

**New Prairie High School**  
Business Technology • Construction Technology  
Engineering • Health Careers • Marketing

**South Central High School**  
Agricultural Science • Natural Resource Management  
Business/Marketing

**Westville High School**  
Agricultural Science • Natural Resource Management  
Marketing/Entrepreneurship

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## Advanced Manufacturing Technology

Our program, developed in consultation with regional business and industry, prepares students for entry-level employment in the metalworking and manufacturing fields. High-tech laboratory experiences give students hands-on opportunities to work with engine lathes, milling and drilling machines, and computer numerically controlled (CNC) machines, as well as with computerized lathes, mills, and robots. The curriculum includes welding, machining, pneumatics, hydraulics, CAD, CAM, and geometry.

## Agricultural Sciences and Natural Resource Management

Studies in food, fiber, and natural resource systems provide students with a broad-based knowledge of agriculture and its role in our economy and society. Courses and lab work cover a variety of topics including: livestock and animals, foods and food science, plants and soils, agribusiness, mechanization, farm management, and landscape management.

## Automotive Services Technology

Students study several facets of the automobile service trades under an ASE certified instructor and receive training in troubleshooting and repairing automotive problems. Auto Tech students are trained on engine performance and rebuilding, as well as on heating/air, transmission/transaxle, electrical, brake, and suspension systems. Training in this NATEF-certified program focuses on OBD I & OBD II computer systems used in today's vehicles. Certification in R12 refrigerants handling and MIG welding augment the skills needed to prepare for ASE certification.

## Construction Technology

Hands-on projects are used to teach students the skills they need for success in the building and construction trades. Courses cover a variety of disciplines, including: carpentry, plumbing, heating, masonry, drywall, roofing, insulation,

electricity, interior decorating, and finishing. Our students also learn the requirements of home ownership and come away with practical experience in home construction.

## Cosmetology

This two-year program is designed to build the skills and knowledge necessary to perform beauty treatments, including the care and beautification of the hair, complexion, and hands. Upon completion, students are prepared to test for state certification. Classes meet a minimum of 20 hours per week, Tuesday through Saturday, at a local beauty college.

## Culinary Arts Academy

Our curriculum follows that of the National Restaurant Association's Pro Start Program, providing students with the general knowledge and skills required for entry-level positions in the food services industry. Student chefs cater events at our facility and for outside clients, providing hands-on experience that closely equates to work in the culinary industry.

## Criminal Justice & Law

If you are interested in pursuing a career in law, law enforcement, corrections, or a security profession, join the rank and file of the law enforcement careers academy today. There are two different classes you can sign up for either as a junior or senior. The Criminal Justice System class surveys the legal system and the various careers available. You will

discuss and be exposed to the process from a suspect being questioned to the convicted being placed in prison. In the Criminal Investigations class, you will study evidence collection, interview techniques, and proper documentation. Each class invites numerous guest speakers and takes several field trips.

## Early Childhood Education

This program focuses on caring for and teaching children pre-school through the third grade. Students learn about child development, prepare lessons for young children, and take part in internships at community day cares and pre-schools to earn their Childhood Development Associate certificate.

## Electronics and Computer Technology

Our program is designed for students interested in entering the fields of computer repair and electronics. Course work in electronics addresses digital electronics, soldering, circuit design, cables, resistors, and residential wiring. Computer repair curricula centers on helping students achieve A+ Certification for technicians, including adding and upgrading components, working with operating systems, networking, and peripherals.

## Engineering

Courses in Engineering are offered through Project Lead the Way (PLTW), a pre-engineering curriculum for high school students. Students learn problem-solving skills, with an emphasis on the development of three-dimensional models, both through sketching and the use of CAD

technology. Techniques and equipment are state-of-the-art and are currently being used by engineers across the nation. Students in the program are well prepared for post-secondary bio-medical, electrical and mechanical engineering course work.

## Facility Maintenance

This course is designed for special-needs students who would like to acquire skills in the general maintenance of large facilities. Topics addressed include basic cleaning, electrical and plumbing repair, framing, drywalling, painting and wallpapering, and landscaping. Students learn safety procedures related to tools and bio-hazardous materials, and gain experience in the proper use of hand and power tools.

## Health Careers Academy

Our program offers students a head start in the high-demand healthcare industry. Course work covers medical terminology and basic anatomy, along with patient care skills such as taking blood pressures, administering first aid, and performing CPR. Students may obtain a Certified Nursing Assistant (C.N.A.) license while still in high school. Apprenticeships at area health care facilities are available for second-year students.

## Interdisciplinary Cooperative Education

Interdisciplinary Cooperative Education (ICE) is a cooperative arrangement in which the school and local business and industry provide a supervised, on-the-job training program in the occupation of the student's choice. Students attend classes at their high school part of the day, followed by on-location training at a local business or industry. The ICE experience is coordinated by the ICE instructor, in partnership with area employers.

## Welding Technology

This course prepares students for entry-level employment in the metalworking industry. Areas of instruction include: oxy-acetylene welding, shielded metal arc welding, gas metal arc welding, gas tungsten arc welding, and flux cored arc welding, along with oxy-acetylene and plasma cutting. The program also offers students practical experience in computer-assisted welding, burning, and programming. Students work toward AWS entry-level skills and AWS Certification.



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