

Call for Proposals: Bucknell Chemical Engineering Senior Design Projects

written by Lauri Moon | October 15, 2019

Bucknell University students are asked to work on a project for a client and produce a tangible result (deliverable) based on that work. The deliverable can be a process, a device, a scientific or engineering study, a design or a simulation that addresses a problem involving chemistry and engineering.

General Requirements (please refer to CHEG 410 Overview and Project Proposal Guidelines link for additional requirements and selection criteria):

1. A client with a clear interest in and reason for supporting the project
2. A client that can be easily and reliably contacted by the supervisors
3. A client who understands and will sign-off on the legal responsibilities of your project, clearly defining ownership of any intellectual property and release of liability. Clients must allow your project to be shared at least within the class for presentation purposes.

Client questions can be directed to the KEEN Industrial Liaison, Shane Cohen (scohen@bucknell.edu), and course coordinator, Professor Brandon Vogel (bmv002@bucknell.edu). Note that while all projects will be given consideration, no project is guaranteed to be selected.

[CHEG 410 Overview](#)

[Project Description Form](#)

[Project Sponsor Mentor Responsibilities](#)

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As the lean value stream quickens, a traditional organizational structure becomes costly and cumbersome. To adapt, employees need to be trained to operate as self-directed work teams within a product family or along a supply chain. We've entered the era of the "Autonomous Workforce," the next logical step in a company's lean journey. Learn why this transformation is necessary and how to prepare your organization to make it.

Lean Your Team

Engineering Design Assistance Opportunity at Penn State for Fall 2019 Semester

written by Lauri Moon | October 15, 2019

The Learning Factory at Penn State provides undergraduate engineering students the opportunity to tackle real-world design problems utilizing classroom engineering design knowledge and tools. PennTAP provides Learning Factory engagement opportunities with businesses and organizations across the state of Pennsylvania. These projects, scoped and presented by sponsors, allow students to practically design or improve an idea that a business may not have the resources or manpower to tackle. Over the years, these engineering design capstone projects have provided proof-of-concept and prototype designs that have made a significant impact across the commonwealth.

Through the collaboration with the Learning Factory program, PennTAP can provide needed technical assistance to help move company ideas forward through design, proof-of-concept, and prototype assistance. There is a \$3500 donation needed to sponsor a team of 4-6 senior engineering students for a 15-week semester project

(approximately 400-600 hours of student work.) Additionally, intellectual property protection and non-disclosure agreements can be procured if requested by the sponsor.

Through Learning Factory's support, PennTAP can provide clients an opportunity to engage with Penn State across most engineering disciplines including, but not limited to, computer science and engineering, biomedical, mechanical, electrical, material science, energy, chemical, and industrial engineering.

Project submission deadline is August 16th!

Contact PennTAP at 814-865-0427 or penntap@psu.edu to learn how your business can collaborate with the Learning Factory by sponsoring a team project.

DEP Offering Grants to Small Businesses

written by Lauri Moon | October 15, 2019

The Pennsylvania Department of Environmental Protection (DEP) announced the availability of **\$1 million in grant funding to Pennsylvania small businesses and farmers for energy efficiency, pollution prevention, and natural resource protection projects through the Small Business Advantage grant program.** Applications will be considered on a first come, first served basis, and will be accepted until fiscal year 2019-20 funds are exhausted or April 12, 2020, whichever occurs first.

The complete grant application package, which includes step-by-step instructions and instructional videos for completing the online application, is available by visiting the DEP Small Business Ombudsman's Office website.

Congressman Fred Keller Visits Ralph S. Alberts Co., Inc.

written by Lauri Moon | October 15, 2019

IMC joined Congressman Fred Keller in his recent tour of Ralph S Alberts Co, Inc. IMC has had the pleasure of supporting RSA and its manufacturing efforts for the past 25 years! #ManufacturingPA #MadeinPA #MEPNationalNetwork



If interested in hosting a state or federal senator or representative at your manufacturing facility, contact Lauri Moon at laurim@imcpa.com or 570-329-3200x8085.

IRCs (IMC) Driving Manufacturing Economy

written by Lauri Moon | October 15, 2019

2018 PA Manufacturing Scorecard Results Illustrate the Strong Performance of the State's Manufacturing Industry

Williamsport, Pa. — May 29, 2019. Recent published findings from the 2018 PA Manufacturing Scorecard prove that Pennsylvania's manufacturing economy is strong and growing, performing better in some areas than national trends.



These findings also underscore the work of the Williamsport headquartered Innovative Manufacturers' Center (IMC), Inc., one of Pennsylvania's seven Industrial Resource Centers (IRCs). The IRCs are nonprofits strategically located throughout the Commonwealth of Pennsylvania that, for more than 30 years, have served as the state's lead economic development organizations supporting manufacturing. The IRCs provide support and services to small to mid-sized manufacturers that make up more than 92% of the state's manufacturing base, enabling them to grow, thrive and continue to be vital and productive contributors to Pennsylvania's economy.

"The Industrial Resource Center (IRC) Network augments the free market by helping small to mid-sized manufacturers gain access to quality consulting services that would otherwise be cost prohibitive to these mostly rural companies," said Dan Manetta, Executive Director and CEO of Innovative Manufacturers' Center (IMC), the IRC covering 12 counties in Central PA. "Services include strategic planning, business growth, process improvement, advanced manufacturing technologies, cybersecurity, among others. This non-profit support is a win-win for both manufacturers and consultants by reducing the cost of sales to rural companies and by helping them identify their specific needs in an unbiased manner. Economic impact is captured by an independent third-party survey of manufacturers served,

and has shown an ROI of around nine-to-one back to the state coffers. There is no 'needs based testing' and all manufacturers are eligible for services. The 2018 PA Manufacturing Scorecard confirms the statewide success of this program.”

The IRCs specialize in providing technical assistance to the manufacturing sector throughout Pennsylvania’s 67 counties by assisting companies with improved bottom line strategies, productivity enhancement, waste elimination and topline growth by supporting strategic initiatives, new and improved products, market differentiation and workforce development strategies. Funded through the PA Department of Community & Economic Development (DCED), the IRCs are also one of three key programs that make up Governor Tom Wolf’s Manufacturing PA Initiative, a plan to enhance the growth and competitiveness of Pennsylvania’s manufacturing companies by fostering strategic partnerships and training-to-career pathways.

PA Economic Indicator Results

The PA Manufacturing Scorecard 2018 indicates that Pennsylvania is the 8th largest manufacturing state in the country based on gross domestic product (GDP), the market value of all final goods and services produced by manufacturers in an economy. In 2017, PA manufacturers generated more than \$88 billion in GDP. While Pennsylvania ranks 8th in the nation among states’ contribution to GDP, it is competing with much larger, more populated states, such as California and Texas that typically hold the #1 and #2 ranking. Pennsylvania is also keeping up with neighboring states, including Ohio, Illinois, Indiana and outpacing New York.

In the last 10 years, Pennsylvania experienced an increase of 17.5% in manufacturing GDP, whereas U.S. manufacturing experienced an increase of 34.9% over the same time period. However, in recent years, Pennsylvania has outperformed the nation’s manufacturing GDP growth, marking a 10.3% increase to the U.S.’s 9.4% between 2013 and 2017 and 5.0% to 4.5% between 2016 and 2017.

For Jim Futrell, Jr., CCR, Vice President - Market Research & Analysis of the Allegheny Conference on Community Development, this data is compelling. Mr. Futrell, on behalf of the IRC Network, conducted the analysis for the 2018 PA Manufacturing Scorecard from economic reports from the U.S. Bureau of Economic

Analysis, the U.S. Bureau of Labor Statistics and the U.S. Department of Commerce.

“What the data indicate is that Pennsylvania is well positioned as it competes with other neighboring states and those that are historically identified as part of the ‘Industrial Heartland’ for their sustained economic reliance on manufacturing,” explained Mr. Futrell. “It also demonstrates that manufacturing within Pennsylvania remains a vital and dominant economic sector, disproving the broad misconception that manufacturing is dead in Pennsylvania, as well as the U.S. For Pennsylvania manufacturers, the benefit of having access to the extensive resources and business expertise of a central conveying organization like the IRC Network is invaluable.”

One of the biggest changes facing small to mid-sized manufacturers today is the emergence of Industry 4.0, a term referencing the fourth industrial revolution. At its most basic, Industry 4.0 involves optimizing the third industrial revolution’s integration of computers and making them “smart.”

Coincidentally, Industry 4.0 principles, technologies and processes are directly tied to two of the biggest challenges facing the economic performance of the state’s small to mid-sized manufacturers: making ongoing continuous improvements and identifying growth opportunities. Often these manufacturers lack the in-house expertise to pursue or deploy these principles and technologies.

The IRC Network is at the forefront of the Industry 4.0 movement, offering its clients a full breadth of services to understand and implement the new technologies, including autonomous robotics, additive manufacturing and 3D printing, Internet of Things, Cloud computing, cybersecurity, big data and analytics, simulation and horizontal/vertical software integration. Every one of the seven IRCs has industry experts specifically trained on innovation processes to teach manufacturers to use the tools at their disposal.

In regard to the 2018 PA Manufacturing Scorecard results on employment and wages, Pennsylvania has 14,414 manufacturing establishments with more than 561,700 manufacturing employees, ranking the state as the 6th largest employment base for manufacturing among all 50 states. Moreover, these manufacturing employees also account for almost 10% of the total state workforce.

The leading Pennsylvania manufacturing industries in 2017 contributing to the total manufacturing employment in the state were fabricated metal product manufacturing with 80,125 employees (14.3%), food manufacturing with 71,622 (12.7%), machinery manufacturing with 43,628 (7.8%) and chemical manufacturing with 40,165 (7.2%). Rounding out the top 5 is primary metal manufacturing with 34,938 employees (6.2%), a figure that is more than double the national average.

Additionally, the annual wage of a manufacturing employee in Pennsylvania in 2017 grew by 2.2% to \$61,111, which is 13.2% higher than the average Pennsylvania wage of \$54,000.

For Pennsylvania manufacturers, the IRC Network is committed to building a world class workforce for the 21st century and has a proven track record in job creation and retention. IRCs facilitate employer engagement and provide career awareness and workplace learning opportunities through a five-step methodology that links to universities and students, advances incumbent workers, develops industry-driven curriculum, builds the pipeline and links with K-12 schools and finally, builds overall career awareness.



“Hermance Machine Company is experiencing unprecedented growth and innovative development thanks to the ongoing partnership with IMC. As seen by the picture, IMC training in LEAN education and patent and intellectual property seminars have supported the integration of this robotic cell to help Hermance automate some of our processes for more efficient practices. IMC has been a true friend in the continued growth and development of Hermance Machine Company.” Kelly Vogel, Human Resources Administrator, Hermance Machine Company.

Ms. Vogel’s testimonial underscores the outcomes that most IRC clients experience. In fact, in fiscal year 2017-2018 alone, IRC clients achieved increased sales that generated \$185 million in increased demand for Pennsylvania manufactured products and services. During this same timeframe, IRCs also helped to create and retain more than 5,100 jobs.

From business opportunities and innovations to process improvement and workforce development and training, there's little Pennsylvania's IRCs can't do to support Pennsylvania manufacturers' needs for growth. For more information on the 2018 PA Manufacturing Scorecard, visit pamade.org/manufacturing-reports/. If you are interested in working with PA's IRC Network, visit pamade.org to find the IRC nearest you.

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About the Innovative Manufacturers' Center (IMC), Inc.

Founded in 1988, the Innovative Manufacturers' Center assists in connecting manufacturers in 12 Pennsylvania counties with the most effective regional, state and national resources to help companies innovate, grow and prosper. An affiliate of the U.S. Department of Commerce, National Institute of Standards and Technology's Hollings Manufacturing Extension Partnership and supported by the Pennsylvania Department of Community and Economic Development, IMC is one of seven industrial resource centers in Pennsylvania and serves manufacturers in Lycoming, Montour, Northumberland, Union, Snyder, Clinton, Centre, Mifflin, Juniata, Huntington, Blair and Bedford Counties. For more information, visit imcpa.com.

About the Industrial Resource Center (IRC) Network

The IRC Network represents seven private nonprofits strategically located throughout the Commonwealth that play a critical role in helping Pennsylvania manufacturing continue to thrive. Working collaboratively, company by company, the IRCs provide the expertise, tools, and services that enable manufacturers to respond to changing markets, new technology, and the competitive pressures of today's global economy. The IRC Network is funded through the PA Department of Community & Economic Development. For more information about the IRC Network, visit pamade.org.

About Hermance Machine Co.

Headquartered in Williamsport, Pa., Hermance provides a wide selection of quality industrial woodworking equipment from the U.S. and abroad. Clients can choose

from a line of quality new and used woodworking machines on display at their Williamsport showroom. As an added convenience they also offer a wide variety of quality machine parts and wood crafting supplies with worldwide shipment available. Hermance also specializes in equipment refurbishing and offer a variety of quality used machines. For more information, visit hermance.com.

IMC Welcomes New Board Members

written by Lauri Moon | October 15, 2019

The Innovative Manufacturers' Center (IMC), a public-private partnership dedicated to increasing Central Pennsylvania manufacturers' innovation, productivity and profitable growth, welcomes Jason Fink and Marcus Annicelli to its Board of Directors.

Jason Fink is President/CEO of the Williamsport/Lycoming Chamber of Commerce where he is responsible for economic development programming and oversees and is involved with the travel and tourism initiatives for Lycoming County. Jason is also on the board of the River Valley Regional YMCA and is a member of both WASD and JASD's Career Technical Education Advisor Councils.



Marcus Annicelli has over 25 years of advanced manufacturing experience in numerous progressive and highly successful manufacturing firms. These have included high-mix, heavily-automated to low-volume, customized product manufacturing. Marcus is experienced with electronic circuit boards, packaged products, military and medical products, architectural and furniture items and most recently large mechanical and



electrical fabrication. Marcus recently joined M-B Companies, Aebi Schmidt as Operations Manager for the Muncy, PA operation producing top of the line and innovative pavement marking equipment. He sits on the Governor's Hard Wood Development Counsel and holds an executive board position at Hope Enterprises.

Founded in 1988, the Innovative Manufacturers' Center assists in connecting manufacturers in 12 Pennsylvania counties with the most effective regional, state and national resources to help companies innovate, grow and prosper. An affiliate of the U.S. Department of Commerce, National Institute of Standards and Technology's Hollings Manufacturing Extension Partnership and supported by the Pennsylvania Department of Community and Economic Development, IMC is one of seven industrial resource centers in Pennsylvania and serves manufacturers in Lycoming, Montour, Northumberland, Union, Snyder, Clinton, Centre, Mifflin, Juniata, Huntingdon, Blair and Bedford Counties.

IMC Director Speaks about Leadership to WAMS Builder's Club

written by Lauri Moon | October 15, 2019

Dan Manetta, Executive Director/CEO for Innovative Manufacturers' Center (IMC) headquartered in Williamsport, PA, was asked to speak at one a weekly meeting of the Williamsport Area Middle School (WAMS) Builder's Club, an affiliation of the Kiwanis Club. The students work on community leadership projects under the direction of Mr. Mike Lundy.



Mr. Manetta was asked to facilitate a discussion on leadership and some of the key elements to being a successful leader. The discussion included: assessing the situation, establishing direction, communication, acquiring followers and managing resources. The class was fully engaged and participated with comments and answers that showed very good knowledge and maturity. "This program is truly a bright spot in our education system with respect to "building" future leaders." stated Dan Manetta.

New Machine Shop Webinar Series

written by Lauri Moon | October 15, 2019

As identified by more than 50 assessments conducted over the past year, **machine shops and fabricators have common issues:**



- **Shortage of skilled employees**
- **Improving the order quoting process**
- **Growing their business**
- **Improving the company's website**

Join us for no-cost, one-hour webinars to help address these needs. Below are links to sign-up for each webinar.

Organizing Your Shop Floor to Increase the Productivity of Your Most Valuable Assets - You and Your Employees

- **Date:** Tuesday, **June 11, 2019** from 11:30 a.m. to 12:30 p.m.
- **For more information and to register, click here.**

Job Shop Quoting: How to Streamline Your Process

- **Date:** Tuesday, **July 9, 2019** from 11:30 a.m. to 12:30 p.m.
- **For more information and to register, click here.**

Machine Shop Sales and Growth Strategies

- **Date:** Tuesday, **August 6, 2019** from 11:30 a.m. to 12:30 p.m.
- **For more information and to register, click here.**

How to Take a Proactive Approach to Marketing Your Machine Shop

- **Date:** Tuesday, **September 10, 2019** from 11:30 a.m. to 12:30 p.m.
- **For more information and to register, click here.**

IMC Welcomes Donita Rudy to its Board of Directors

written by Lauri Moon | October 15, 2019

Donita Rudy currently serves as the Chief Operating Officer for Ralph S. Alberts Co., Inc, one of America's most resourceful, multifaceted customer molders recognized within the amusement industry for their ride padding products manufactured in Montoursville, PA. She is an accomplished business professional holding C-level executive management positions and as a consultant assisting clients from a variety of industries and business sizes with financial, strategic and turnaround management services. She is passionate about enhancing business operations - and building skills and knowledge for business leaders.



Her leadership roles have been as President & CEO of a \$2 Billion, NASDAQ listed financial services holding company; CEO of a manufacturer in a turnaround environment; Receiver in several Court appointments, Committee Chair in Chapter 11 Bankruptcy proceedings and as Financial Advisor for creditors or businesses entities in turnaround or transition situations. She is certified as a Turnaround Professional, Lean Practitioner and Exit Planner.

Recognition includes U.S. Banker's national list of 25 Women to Watch in Banking honors for repeat years and being featured in the cover story in Community Banker on *The Fearless Female Factor*. Ms. Rudy has received the ATHENA Award for community and business achievement, Pennsylvania's Best 50 Women in Business recognition and inclusion in the Top 100 People in Business.

Donita has reached aspiring business leaders as an adjunct faculty member in business curriculum for Saint Francis University and as a featured speaker and trainer on various leadership and business topics including those for the Pennsylvania Institute of Certified Public Accountants (PICPA), Penn State Executive Programs and Innovative Manufacturers' Center (IMC).

Welcome to the team Donita!