

# Butler Eagle

## Focus on tech, hands-on training good for students and employers

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In today's challenging job market, technical skills and real-world work experience can make a big difference. It's also true that in this fast-changing market, many employers are looking for people with experience using the latest technology.

All of these ideas are at the core of course development at **Butler County Community College**, often in collaboration with area employers and other educational institutions.

While many people lament that manufacturing jobs have been sent offshore and say "we don't make anything anymore," the job market in Western Pennsylvania disproves that complaint. Manufacturing, metal fabrication and machining are vibrant job markets in the region — and most of these jobs pay good, family-sustaining wages.

When it comes to being on the leading edge of technology, BC3 is in the process of joining an elite network known as the Fab Lab, which is affiliated with the Massachusetts Institute of Technology and features use of the latest computer-controlled laser cutters and milling machines as well as 3-D printers. The 3-D printers, sometimes described as additive manufacturing, are gaining acceptance in large and small manufacturers as well as in business startups because they can produce prototypes of products in a fraction of the time and at a fraction of the cost of traditional methods. 3-D printers are expected to revolutionize manufacturing, producing not only prototypes, but also making components and replacement parts in large, complex machines.

By equipping its machine technology labs with the latest in 3-D printing, BC3 not only satisfies requirements to be a top-rated Fab Lab, but it also gives its students a leg up in the job market, by being ready to work for an established company or possibly starting their own company.

A Fab Lab designation will bring prestige to BC3, but it will also link the college's teachers and students to a global network of 60 Fab Labs in the U.S. and in 30 other countries. If BC3 does gain the Fab Lab designation, it will be one of only two in Pennsylvania.

As part of the network, students and teachers can learn from the other Fab Labs, sharing experiences to shorten the learning curve and avoiding mistakes.

While the Fab Lab is at least partly geared toward the future of manufacturing, there are less high-tech skills that are still in demand today, such as welding. In this case, BC3 responded to industry needs for welders through a collaboration with the Butler County Area Vocational-Technical School. The rapid development of the shale gas industry in Western Pennsylvania has

boosted demand for welders, so BC3 offers a non-credit welding course using the Vo-Tech's welding lab facilities.

Other effective partnerships are found in the tool and die industry, with both Oberg Industries and Penn United Technologies working with high schools to expose students to in-demand jobs requiring a high level of technical and computer skills. These courses and the precision machining apprenticeship encouraged by the Butler County Manufacturing Consortium are win-win propositions — they teach students the skills necessary for well-paying jobs in the region and they help employers identify young people with the aptitude, skills and attitude to become productive employees.

Manufacturing jobs still are called blue-collar jobs, but that definition is changing. Years ago, a job in a machine shop or steel mill might have meant mostly manual labor and very basic skills. Today, many manufacturing jobs require strong technical skills, with many cutting or milling machines that were once operated manually now being computer controlled. People working in these jobs need math and science skills, many of the elements in the STEM (Science, Technology, Engineering, Math) curriculum.

Beyond redefining manufacturing, another transformation has been happening in schools. Vo-tech programs once had something of a stigma because it was not college track. But in recent years, vo-tech programs have gained respect and popularity because of the increasing use of technology and good job prospects for graduates.

The cooperation between BC3, local employers, the vo-tech and area high schools is encouraging because it helps today's young people land good jobs in the changing market and helps area employers remain competitive.

— J.L.W.III