Guilford Technical Community College

CNC Machinist Training Program

The CNC (Computer Numerical Control) Machinist Training Program originated from the need of Machine Specialties, Inc. (MSI) to hire qualified machinists with the ability to troubleshoot and solve problems. GTCC, MSI, and the Guilford County Workforce Development Board worked together to develop a CNC training program, as well as an assessment program to increase the success/hire rate. Upon completion, students exited with machining skills, employability skills, and industry-recognized credentials (National Institute for Metalworking Skills, or NIMS, and Career Readiness Certificate, or CRC). In addition, this Continuing Education training can be cross-walked to credit hours for individuals interested in pursuing a CNC Machining degree.

At the conclusion of the MSI Customized Training Project, the focus of the training shifted to the machining industry, and the program has since been expanded as a collaborative effort of six community colleges.

DETAILS

In late 2009, Machine Specialties, Inc. (MSI) announced an expansion, and a need for approximately 50 qualified entry-level machinists. In addition to basic machining skills, MSI stated they wanted individuals “who want a career in manufacturing, not just a job.” Their necessary attributes were a good attitude, willingness to learn, humble, and a good fit for the MSI culture. They really needed to find the right people.

GTCC’s CNC Machining Program had the ability to provide the training, but there was not a pipeline of potential candidates large enough to meet MSI’s requirements. The Workforce Development Board had access to a pipeline of individuals, but not all met the aptitude requirements for the machining job. Through this partnership of company, college, and Workforce Development Board, a common goal and action plans were developed to provide the trained individuals to meet the company’s needs.

MSI and GTCC worked together to identify the training models and skill sets that were required, while MSI and Workforce Development identified the basic skills and abilities necessary for employment at MSI. Assessments were developed that accomplished two things. The CNC classes were populated by students with the aptitude required to be successful. For those individuals who were not eligible for the class based on their assessment, a path was provided to help them improve their skills or refer them to another occupational skill training that matched their abilities.

The assessments measured the individuals’ skills in math, reading, mechanical, and computers. GTCC and MSI worked together to secure a Customized Training Project, valued at $175,000, to support the expansion of their facility and the training of machinists. The machining training took place in the GTCC Machining Labs, and consisted of manual machining, blueprint reading,
metallurgy, CNC machining, and CNC turning. In the initial classes there were 39 students enrolled. Of the 39 students enrolled, 24 were offered positions at MSI, with 19 accepting positions. Nearly all the students who completed the training went to work at MSI, or were offered similar positions at other machining companies.

At the conclusion of the MSI Customized Training Project, the focus of the training shifted to the machining industry. At this point, multiple companies began filling their employment needs from the students that successfully completed the training.

The program has since been expanded as a collaborative effort of six community colleges with a goal of creating college synergy that reaches a wider area while providing a consistent and standardized pipeline of potential employees.

Implementation began in January 2010.

**Partner Type(s):**
- Business/Industry (direct involvement)
- Workforce Development Board/One-Stop

**Impact/Outcomes**
The most visible outcome for the customer (MSI) is the quality and quantity of potential new hires for their open positions. The Workforce Development Board also served as a partner by providing a pipeline of candidates for the training and eventual employment. Another positive from this program is the expansion of the training to meet the machining industry requirements (not just MSI). Also, for those candidates that were unable to pass the assessments, a path was provided to skills improvement.

**Funding Source(s)**
The funding for the MSI portion of this project was provided by the Customized Training program of the North Carolina Community College System. The amount was $175,000.

**REFLECTIONS**

**Innovation or Best Practice**
This is a “Model of Collaboration” for a multi-organization partnership centered around a common goal. It was best exemplified as each separate organization concentrated their strengths toward the goal of providing qualified workers to MSI.

**Lessons Learned**
- Human Resource Development needs to be included as part of the training curriculum.
- A pipeline of qualified candidates must be maintained. For a large hiring need, innovative marketing strategies are necessary.

**Scalability**
- For students that complete the training, a cross-walk opportunity into a CNC Degree is possible.
- This program was expanded into a multi county/college program to reach additional CNC employment opportunities, as well as additional potential employees.
RESOURCES

Workforce Learning Summit
Steve Castelloe, Director of Business and Industry Training, Guilford Technical Community College
Lance Kress, Director of Training, Machine Specialties, Inc.
Lillian Plummer, Executive Director, Guilford Workforce Development Board

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