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TO RECEIVE NTMA PROGRAM INFORMATION - CALL 1-866-326-6862

WHAT IS THE NTMA?

The National Tooling and Machining Association (NTMA) is a national trade association open to owners and managers of small, medium and large metal working businesses. The NTMA is organized to:

- A. Represent local business with government at the federal and state levels.
- B. Educate members in management principles.
- C. Aid in the marketing of products.
- D. Publicize the services available from member companies.
- E. Develop training programs for all employees.

Of the more than 13,000 small metalworking businesses in the nation, over 2,700 are members of the NTMA.

ABOUT THE PITTSBURGH CHAPTER:

Incorporated in 1976 as the "The Pittsburgh Chapter National Tool, Die and Precision Machining Association," the Pittsburgh Chapter of the NTMA has tripled in membership size over the years as a result of serving the Southwestern Pennsylvania Metalworking Industry. As of 2000, the Pittsburgh Chapter consists of Member Companies, Associate Member Companies, as well as several Vocational -Technical and Career & Technology schools.

SCHOOL OBJECTIVE:

The objective of the apprenticeship program is to meet the training needs of industry. It is an educational program, of professional stature, for the training of apprentices in the metalworking trades.

APPRENTICE TRAINING PROGRAM:

The NTMA apprenticeship classroom instruction supplements the on-the-job apprenticeship training. Upon completion of the four years of classroom instruction, along with the concurrent on-the-job practical experience, each individual who is registered with the U.S. Department of Labor will be a certified Journeyman in the Metal Trades Industry. It is also possible for a graduate to complete the apprenticeship program with NIMS Credentials.

WHO IS ELIGIBLE TO ENTER THE NTMA APPRENTICESHIP PROGRAM?

Apprentices are selected into the program by individual non-member and member companies of the NTMA. Companies desiring to enroll employees into the apprentice program must contact the NTMA Program Administrator. Individuals who are not sponsored by a company are also eligible for enrollment. While the NTMA sponsored apprenticeship-training program is approved and registered with the state, enrollment alone in this program does not meet the state requirements for a Journeyman status. In order to meet the state Department of Labor requirements for Journeyman status, each apprentice must be registered with the Pennsylvania Department of Labor through his/her employer.

COURSE REQUIREMENTS:

During the first three years of the training program, classroom instruction will focus on the areas of Mathematics, Technology of Machine Tools, Blueprint Reading, and Technical Drawing. The fourth year classroom instruction will focus on the areas of Jigs and Fixtures, Basic Die Design and CNC Program Interpretation. In addition to classroom instruction, the apprentices are required to demonstrate the practical application of classroom theory, by completing either NIMS credentials or NTMA hands-on projects. All projects or NIMS credentials are to be completed by the apprentice outside of class at their company or at an NTMA sponsored site.

Classes will meet one evening per week for 36 weeks each year of the program. To meet the Pennsylvania State requirements for Journeyman status, an apprentice must attend 144 classroom hours concurrently with 2000 hours of practical on-the-job experience per year. NTMA projects or NIMS credentialing will require additional hours per week during the program.

NIMS

The NTMA has assisted in the development and endorsement of the national program known as the National Institute of Metalworking Skills (NIMS). This program certifies machinists based on practical skills and standards of all disciplines in various levels such as turning, milling and grinding. The NTMA believes that NIMS compliments the current journeyperson certification system. NIMS can assist employers in assessing potential employees, aid in hiring and placement, and validate skills for advancement and promotions of existing employees. The NTMA curriculum parallels the NIMS format and has also implemented hands-on projects or NIMS credentialing to help an apprentice and employer use the NIMS system. By implementing this requirement the NTMA goal is to expose the student to a well-rounded apprenticeship program that blends practical fundamental exercises with detailed classroom theory. An apprentice may choose either to complete a hands-on project or complete a NIMS credential as part of the NTMA curriculum.

Apprentice Related Training Program Outline

For Machinists, Mold Makers, Tool and Die Makers, Carbide Performers, Press Technicians and Grinders, Tool and Die Designers.

First Year Apprentices

Mathematics (Gen. Math.)	36 Hrs.
Blueprint Reading	36 Hrs.
Technology of Machine Tools	<u>72 Hrs.</u>
Total 144 Hrs.	

** Special Assignments (3 Projects or 2 NIMS Credentials)**

Second Year Apprentices

Mathematics (Algebra)	36 Hrs.
Blueprint Reading/ Mechanical Drawing (Intro. To Geometric Dimensioning & Tolerancing)	36 Hrs.
Technology of Machine Tools	<u>72 Hrs.</u>
Total 144 Hrs.	

** Special Assignments (3 Projects or 2 NIMS Credentials)**

Third Year Apprentices

Mathematics (Trig.)	54 Hrs.
Technology of Machine Tools (Numerical Control & CNC)	72 Hrs.
Geometric Dimensioning and Tolerancing	<u>18 Hrs.</u>
Total 144 Hrs.	

** Special Assignments (2 Projects or 2 NIMS Credentials)**

Fourth Year Apprentices

Jigs & Fixtures	56 Hrs.
Basic Die Design	24 Hrs.
CNC Program Interpretation	40 Hrs.
Welding/Brazing	8 Hrs.
Applied Materials	8 Hrs.
Hydraulics	<u>8 Hrs.</u>
Total 144 Hrs.	

** *Optional* Assignments (2 NIMS Credentials) **

TESTING AND GRADING:

To qualify for journeyman papers, the apprentice is required to maintain a passing grade in each of the 4 years and complete all required assignments. Apprentices must average a "C" grade or better over the four years, as well as pass all parts of the final exam, to be eligible for a certificate.

TRAINING MATERIALS:

Apprentices are required to provide their own pencils, notepad, and paper. Apprentices are also required to have and use the appropriate books and the Texas Instruments TI-36X calculator throughout training. Books can be purchased at the beginning of each year. Materials for completing projects or NIMS credentials are the responsibility of each individual apprentice.

TRAINING LOCATIONS:

Classes are normally held at the following NTMA training sites:

- Central Westmoreland Career and Technology Center
- Northern Westmoreland Career and Technology Center
- Steel Center Area Vocational Technical School

TABE TESTING:

The Test of Adult Basic Education (TABE) in mathematics will be given to all first year apprentices prior to entering the apprenticeship program. Apprentices who fail to score at or above 8.9 (8th grade, 9th month) will require remediation. One or more remediation programs (lasting 4 to 6 weeks) will be made available among the participating schools. Upon completion of remediation the TABE test will be re-administered. Applicants who fail to score an 8.9 subsequent to remediation will be considered for the program on an individual basis. These individuals' names will be turned into the NTMA. Any apprentice scoring a 12.9 or better, on the TABE, will have the opportunity to test out of the first year of math instruction. Apprentices electing to test out of the first year of math instruction must have written approval from their employer.

ADVANCED PLACEMENT STANDARDS:

Advanced placement i.e., skipping one or more years in the program, is possible for those apprentices entering into years one through three the program who have prior education, experience and/or on-the-job training. An apprentice must take the Advanced Placement test prior to the beginning of the school year. An apprentice must have written permission from their employer on company letterhead in order to test out of the chosen year's curriculum. There will be a fee for the test. The test will determine whether the apprentice has the knowledge and capability to proceed to the subsequent year. NTMA projects or NIMS credentials are still required to be completed even if an apprentice advance places out of a year of the program.

GRADE PERCENTAGES

100% - 91%.....	A.....	Superior
90% - 81%.....	B.....	Above Average
80% - 70%.....	C.....	Average
69% - 0%.....	F.....	Failure

PROJECT GRADING

Apprentices in years one through three are required to complete hands-on NTMA projects or NIMS Credentials outside of class. A separate grade for NTMA projects will be recorded on an apprentices' project transcript. Projects are based on three components: a written process plan, a completed functional part and a written inspection plan. Projects will be graded on the following scale:

C = COMPLETE	Includes: Process Plan, Functional Project and Inspection Plan.
P = PARTIAL	Includes: Some <u>completed</u> component of project.
I = INCOMPLETE	None of the components of the project are completed.

If an apprentice selects to complete a NIMS credential instead of a project, the NIMS credential will be recorded on the project transcript.

Projects and NIMS credentialing are to be performed at the employer's shop. It is the responsibility of the employer to provide the apprentice with materials, tooling, guidance, and shop time to complete the projects. Projects are to be completed in the year they are assigned.

END OF YEAR TEST:

All apprentices will be required to take a final exam at the end of each year of training. In order to be eligible to take the final exam an apprentice must have a grade greater than 70% in each subject area. The final exam will be graded on a pass/fail scale. A score below 70 % is considered to be a failing score. Apprentices who score below 70% in any subject area on the exam will be given one opportunity to re-test. The final exam determines the apprentice's eligibility to move on to the next year of training. The final exam grade will be recorded on the apprentice's transcript. Apprentices will be permitted to use only calculators and the Machinery's Handbook during the test.

ATTENDANCE:

Attendance is mandatory. It is expected that an apprentice attend class for the full 144 hours. If an apprentice misses a class the school administrator will notify the employer of the absence. Attendance is evaluated as a portion of the apprentice's overall class grade. All instructors have been advised that no special attention will be given to apprentices who miss class. It is the sole responsibility of the apprentice to make arrangements to make-up any class work missed due to absence. Past experience has proven that apprentices who frequently miss class are more likely to fail the course.

TUITION RATES:

Due to the fact that the Commonwealth of Pennsylvania underwrites programs of this nature, tuition costs vary from year to year depending upon the amount of available funding from the state. All participating apprentices and employers will be notified of the tuition costs prior to the start of each school year. Tuition costs will be billed to the apprentices or their employer. Textbook costs are not included in the tuition rates and will be billed separately. All fees are due prior to the start of class.

REFUND POLICY

Students will be charged the full amount if attendance goes beyond 30 hours. A per diem rate of \$30.00 per night will be charged for any class attendance prior to 30 hours. The student will be charged the full amount for any books purchased through the participating apprentice school.

ASSOCIATE'S DEGREE IN MACHINE TECHNOLOGY

Eligibility through Westmoreland County Community College

The apprentice related training program is recognized by the Westmoreland County Community College for equivalent college credits toward an Associate in Applied Science Degree in Machine Technology. An apprentice can earn up to a maximum of 30 total credits pending completion of assigned projects. An apprentice who is interested in furthering his/her education must apply at the Westmoreland County Community College for individual assessment of work experience and educational background for determination of appropriate credit awards.

PITTSBURGH CHAPTER NTMA APPRENTICE SCHOOLS:

- | | |
|---|---|
| <ul style="list-style-type: none"> ▪ Central Westmoreland Career & Tech Center
240 Arona Road
New Stanton, PA 15672-9411 | Mary Lou Tarara
(724) 925-3532 Ext. 1309
Fax (724) 925-1423 |
| <ul style="list-style-type: none"> ▪ Northern Westmoreland Career & Tech Center
705 Stevenson Boulevard
New Kensington, PA 15068 | Jill Awes
(724) 335-9389 Ext. 214
Fax: (724) 337-9010 |
| <ul style="list-style-type: none"> ▪ Steel Center Vo Tech School
565 Lewis Run Road
Jefferson Hills, PA 15025 | DennisMcCarthy
(412) 469-3200 Ext. 113
Fax: (412) 469-2745 |

RELATED FACILITY FOR ASSOCIATE DEGREE IN MACHINE TECHNOLOGY

Westmoreland County Community College
Youngwood, PA 15697-1895

Robert G. Myers, Ed.D.
(724) 925-4177
Fax: (724) 925-5808

PROGRAM CONTACTS

1. **APPRENTICE PROGRAM ADMINISTRATOR**
Janet Ward, Director of Training Operations
New Century Careers
425 Sixth Avenue, Suite 2610
Pittsburgh, PA 15219
(412) 258-6621 Fax: (412) 258-6625
jward@ncsquared.com

2. **APPRENTICESHIP DEVELOPER**
Jim Gilmore
N.T.M.A.
RD #11, Box 196
Greensburg, PA 15601
(724) 837-6853 Fax: (724) 837-6055

3. **DEPARTMENT OF LABOR**
Craig Dotson
Bureau of Apprenticeship and Training
(412) 395-5037 Fax: (412) 395-5042

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