

NTMA EMPLOYER HANDBOOK

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

I: GENERAL APPRENTICESHIP PROGRAM GUIDELINES:

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.

For more information about the NTMA visit their website at www.NTMA.org

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 increased in membership size over the years as a result of serving the Southwestern Pennsylvania Metalworking Industry. The Pittsburgh Chapter consists of Member Companies, Associate Member Companies, as well as several Vocational -Technical and Career & Technology schools.

For more information about the Pittsburgh Chapter – NTMA visit our website at www.pghntma.org

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.

REGISTERING AN APPRENTICE WITH THE DEPARTMENT OF LABOR

It is the responsibility of the company to register an employee as an apprentice with the Department of Labor. While the NTMA sponsored apprenticeship-training program is approved and registered with the state, enrollment alone in this program does not meet the state requirement for the journey person status. Each apprentice must be registered through his/her employer with the state Department of Labor to be eligible for journey person status.

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 encouraged 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 Journey person 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 journey person 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 NIMS the NTMA goal is to expose the student to a well-rounded apprenticeship program that blends practical fundamental exercises with detailed classroom theory. Apprentices are entitled to attempt 2 NIMS credentials each year at no cost. NTMA will track the apprentice's progress and help them to achieve this but it is up to them. The theory grades will not be impacted by earning or not earning NIMS Credentials. The NTMA Board has recently removed NIMS as a requirement for the apprenticeship with hesitation. The board is very committed to having apprentices earn NIMS credentials but recognize that some students are just not in the position to do so. The board still expects the apprentices to make every effort to earn credentials. This is a practical change in policy, not a philosophical change in Board opinion. Apprentice may choose either to complete a hands-on project or complete a NIMS credential as part of the NTMA curriculum.

Apprentices are to submit their NIMS projects and required paperwork to the school advisors upon completion. All projects are inspected and reviewed by an industry MET-TEC Committee. If there is someone who wants to challenge the decision of the MET-TEC Committee, they must bring their issue to the attention of the Chairperson of the NTMA Steering Committee. *All challenges must be presented in writing within one month of receiving their results.* The committee will consider the validity of the challenge and make its decision. The decision of the committee is final.

For more information about NIMS visit their website at www.nims-skills.org

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) **

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 31 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.

II: PROGRAM STANDARDS:

TESTING AND GRADING

To qualify for journeyperson 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 specified 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
- New Century Careers Training Innovation Center

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. It is the school's responsibility to administer the TABE (timed) test and to report those results to the NTMA. 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 administered again. Information about those who fail to score an 8.9 will be submitted to the NTMA Steering Committee and will be considered for continued program probation or termination on an individual basis. Those apprentice scoring a 12.9 or above, on the TABE will encouraged to test out of the first year of math but must still have written approval from their employer. 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 of 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. There is a fee for AP testing. If, an apprentice is sponsored by an employer, written permission from the employer on company letterhead must be provided in order to test out of the chosen year's curriculum. A score of 80% on all three sections of this timed AP test will determine that an apprentice has the knowledge and therefore may 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. Apprentices are only allowed to take the advanced placement test once per school year.

- First year apprentices who score below an 8.9 on the TABE will not be permitted to sit for any section of the AP test.
- First year apprentices must score a 12.9 or above to sit for the AP Math test.
- First year apprentices who score between an 8.9 and a 12.9 on the TABE may take the Blueprint Reading and TMT AP test sections but are not encouraged to do so without good reason.
- If a first or second year apprentice fails or does not take the AP Math test, but passes both the Blueprint Reading and TMT sections, the apprentice will be required to take only the Math portion of the curriculum but will not be permitted to move on to the subsequent year of the program.
- If a first or second year apprentice passes the AP Math test but fails or does not take the AP Blueprint Reading and TMT sections, the apprentice will be required to attend the Blueprint Reading and TMT classes but not the Math class. In this situation the apprentice will not be permitted to move onto the subsequent year of the program.
- For those attempting to test out of Year Three, the apprentice will have the opportunity to test out of any one of the three sections individually or all three. If the apprentice passes some of these sections but not all, the apprentice will not be required to attend the classes for which a passing score was made but will not be permitted to move onto the subsequent year program without a passing score on all sections.
- A score of 80% on all three sections of this timed AP test will determine that an apprentice has the knowledge and therefore may proceed to the subsequent program year.
- There is no Advanced Placement test for Year Four 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.

III: PROGRAM POLICIES:

EQUAL OPPORTUNITY POLICY

It has been the consistent policy of the NTMA to afford equal opportunities to all qualified persons regardless of their race, color, religion, creed, sex, age, national origin, veteran status, or non job-related handicap or disability; and to comply with all federal, state and local laws and regulations that govern our activities. This policy also governs all aspects of participation as an apprentice in the apprenticeship program. Accordingly, the NTMA requires all apprentices to refrain from such discriminatory conduct as a fundamental condition of their continued participation.

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.

Any apprentice who misses a class will have *three weeks* from the date they missed to make up any homework, tests, quizzes or class work. At that time, any work not submitted will be counted as a failure and will receive a "0" as a grade.

DRUGS AND ALCOHOL POLICY

The NTMA is vitally concerned with the well-being of all its apprentices, as well as their duty to project a positive business image of the NTMA. Additionally, the possession, use or transfer of illegal drugs, or the unauthorized use or dispersal of legal drugs, is a serious criminal offense, and further, is contrary to the NTMA image as an ethical, law-abiding organization. Consistent with these concerns, all apprentices are expressly prohibited from using alcoholic beverages or illegal drugs in our programs. Individuals who appear to be under the influence of illegal drugs or alcohol, or who are in an impaired or unfit condition, will be subject to severe corrective action up to and including expulsion.

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 16 hours. A per diem rate of \$60.00 per night will be charged for any class attendance prior to 16 hours. Class attendance is counted until the student notifies the NTMA of their intent to withdraw from the program. The student will be charged the full amount for any books purchased through the participating apprentice school.

NO HARASSMENT POLICY

The NTMA is committed to providing every trainee with a learning environment free from discrimination, including sexual harassment. The NTMA strongly supports state and federal laws that protect all trainees from acts of discrimination, including sexual harassment. The NTMA has a written policy against sexual harassment and other acts of discrimination based on a persons race, color, sexual orientation, religion, national origin or disability.

Sexual Harassment comes in many forms of unwanted behavior and can make an apprentice feel humiliated, embarrassed, fearful or angry. Sexual harassment interferes with a apprentice's right to receive an education free from discrimination. The Office of Civil Rights Guidelines on sexual harassment, Fed. Reg. Vol. 62, #49, PHRC Guidelines and PA Bulletin Vol. 11, #5 defines the term harassment to include but not limited to repeated unwelcome and offensive slurs, jokes or other verbal, graphic or physical conduct relating to an individuals' race, color, religion, ancestry, sex, sexual orientation, perceived sexual orientation, national origin, age or handicap/disability. Ethnic harassment includes the repeated unwelcome and offensive use of any derogatory word, phrase or action characterizing a given racial or ethnic group. Sexual harassment shall consist of unwelcome sexual advances requests for sexual favors and other inappropriate verbal or physical conduct of a sexual nature. The NTMA will not tolerate apprentices sexually harassing other persons whether by the same or opposite gender. We also prohibit program personnel from sexually harassing apprentices. If an apprentice feels that they are being sexually harassed by unwanted or unwelcome behavior from an apprentice or program personnel, we encourage them to speak to the Program School Advisor.

Intimidation, bullying and harassing in any form will not be tolerated. No apprentice should direct toward any program personnel or any other person on school property any language or act which threatens force or violence or which is abusive or insulting. Each apprentice shall be responsible to respect the rights of others and to ensure an atmosphere that is free from all of these behaviors.

EXPECTATIONS FOR NTMA PROGRAM

The following guidelines have been established for both the instructors and apprentices involved in the NTMA apprenticeship program:

INSTRUCTORS:

1. Be knowledgeable in the subject area.
2. Be Prepared:
 - a. Plan your lesson ahead of time
 - b. Have all necessary materials needed to teach the lesson
3. Be Respectful:
 - a. Show interest in the students
 - b. Provide Constructive Criticism
 - c. Answer student's questions
 - d. Give praise
4. Vary the Learning Experience:
 - a. Present material in an understandable way
 - b. Know your audience
5. Provide Strong Time Management:
 - a. Be punctual
 - b. Stay focused
 - c. Be aware of what is going on in the classroom

STUDENTS:

1. Be Prepared to Learn:
 - a. Bring all necessary materials including books, paper, pencil etc.
 - b. Have homework completed properly and ready to submit
2. Be an Active Participant in the Learning Process:
 - a. Participate in group discussions
 - b. Ask questions
 - c. Pay attention, stay on task and follow along
3. Be Accountable
 - a. NO Drugs, Alcohol, Firearms or Physical Threats
 - b. No excuses for incomplete work
 - c. Write legibly
4. Be Respectful to other students and instructors:
 - a. Don't talk while others are speaking
 - b. Follow instructions and be cooperative
 - c. Use proper language and tone of voice
 - d. Turn cell phones off during class
5. Have good Attendance:
 - a. Attend every session
 - b. Come on time and return on time from breaks

IV: PROGRAM CONTACT INFORMATION:**PITTSBURGH CHAPTER NTMA APPRENTICE SCHOOLS**

Central Westmoreland Career & Tech Center 240 Arona Road New Stanton, PA 15672-9411	Michelle DeLuca (724) 925-3532 Ext. 1309 Fax (724) 925-1423
Northern Westmoreland Career & Tech Center 705 Stevenson Boulevard New Kensington, PA 15068	Jill Awes (724) 335-9389 Ext. 214 Fax: (724) 337-9010
New Century Careers Training Innovation Center 305 E. Carson Street Pittsburgh, PA 15219	Ed Henry (412) 258-6617 Fax: (412) 258-6625

PROGRAM CONTACTS

- APPRENTICE PROGRAM ADMINISTRATOR**
Paul Anselmo, Vice President NCC Services
New Century Careers
333 E. Carson Street, Suite 431
Pittsburgh, PA 15219
(412) 258-6622, Fax: (412) 258-6625
anselmo@ncsquared.com

Liz Blashock, Program Assistant
(412) 258-6628, Fax: (412) 258-6625
blashock@ncsquared.com
- NTMA STEERING COMMITTEE CHAIRPERSON**
Phyllis Miller
Hamill Manufacturing
500 Pleasant Valley Road
Trafford, PA 15085
(724) 744-2131, Fax: (724) 744-3121
phyllis.miller@hamillmfg.com
- DEPARTMENT OF LABOR**
Craig Dotson
Bureau of Apprenticeship and Training
(412) 395-5037, Fax: (412) 395-5042
Dotson.craig@dol.gov

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