



Getting Started With the National Institute for Metalworking Skills Certification Program

This is a “Big Picture” step-by-step guide to integrating National Institute for Metalworking Skills (NIMS) Standards in your Precision Machining Technology program. This is one person’s recommendation of the best way.

Step 1 *Download the Instructor’s and Trainer’s Guide from the NIMS website (see page 3).* This publication has all the information you need to administer the performance tests. You also should have a copy of the standards, which are available on the website. Both documents are nearly 100 pages, so be prepared for a long download and print run.

Step 2 *Using the Instructor’s Guide, study the performance projects for each of the skills you teach in your program.* Pay close attention to the tool lists and machine tool setup instructions. You will be seeking answers to the following questions:

- Do you have the tools needed to make these parts?
- Can the machines hold the tolerances specified on the prints?
- Do you have the correct inspection equipment to check the parts?

Make lists of perishable tools and non-perishable tools for each of the performance projects; mark what you have and transfer what you don’t have to a procurement list.

Step 3 *Do the performance projects.* This is one of the most important steps in the entire process of implementing NIMS. You will accomplish several objectives. As you machine each of these parts, keep track of your time and update your lists of tools and equipment. When you finish, you will have your tool lists complete and you can also compare your time with the NIMS recommendation.

The second objective is to determine if the skills taught in your program cover all those needed to successfully complete the projects. The third objective is testing the equipment to be sure it can produce the parts well within the tolerances specified on the prints. The machinery should be capable of meeting the tolerances with a moderately skilled person at the controls, not just a master machinist such as you.

As you complete each of these performance projects, think about where this benchmark fits into your curriculum. Strategic placement of each of these projects will work as a motivator for the students if they must “earn the right” to do the project. Properly introduced, these benchmarks add excitement to the lab work and offer the opportunity to celebrate a student’s success and progress.

The fourth and final objective of doing these performance projects is to have them available to mount on a display board set up in your lab. Adding a color copy of one of your credentials will brighten up the display and increase its effectiveness. The projects on this display serve as an example to the students of a properly completed project. This board also serves as a great tool for educating parents and industry

representatives about NIMS and the credentialing projects. It will also help emphasize the professionalism of your program and give a boost to your recruiting efforts.

Step 4 *Find or help establish the local Metalworking Technical Evaluation Committee (MET-TEC).* As the performance projects are completed, they must be checked by a MET-TEC to verify their accuracy. A MET-TEC is a group of volunteers from industry who agree to work with the local metalworking programs on NIMS implementation. In addition to promoting national standards, NIMS seeks to increase the communication and build stronger partnerships between industry and education for their benefit and that of the students and the community.

Step 5 *Take the written exams.* After your performance projects pass the MET-TEC inspection, you can schedule and take the written exams. If you have not registered with NIMS, you must do so now. Send the Registration form and a check in the amount of \$40 to NIMS with the Performance Affidavit and the Exam Notification Form.

It is extremely important that the instructor take these tests before scheduling any students for these tests. You will verify that your curriculum covers all the subject matter included in the tests, by taking the tests. There is no other way to find out what is on the tests. If anything on the test is missing from your curriculum, adjustments can easily be made to ensure the students have a fair chance at passing on the first try. In cases where this procedure was not followed, many students failed the written tests. These failures are bad for the students, the instructor, the program and NIMS. No one wins. Don't let this happen to you.

Step 6 *Establish or review your Industry Advisory Committee.* You most likely already have a committee in place, however you may be required to make some changes.

NIMS will check the following:

- You have an active committee.
- The committee meets more than once each year, three meetings per year are suggested.
- The suggestions made by the committee are acted upon by the program.

You must have written minutes of the meetings. NIMS and the NIMS audit teams view the activity of the Advisory Committee very seriously.

Step 7 *Make sure the machining lab meets the NIMS criteria for Certification.* The lab must meet all OSHA and EPA requirements. This includes guards on the machines, labeling in the lab, safety policies and procedures, and proper chemical storage. Failure to meet these requirements almost guarantees failure of the NIMS audit. The existence of any "imminent danger" hazard in the lab results in an automatic failure of the audit. In most states you can secure help in meeting these requirements from a state agency that provides assistance to industry.

You should have adequate equipment, machinery and tooling to teach the skills specified in the standards. You should have the measuring and gauging equipment required to inspect the projects in the performance tests. This is a function of the standards you choose for Certification and the number of students enrolled in the program.

Step 8 *Start your students in the credentialing process.* The audit team must determine if the curriculum will prepare the students well enough to pass the credentialing exams. The best way to demonstrate this to the audit team is to show a record of students taking and passing the

exams. So you should start encouraging the qualified students to take the NIMS credentialing exams right after you finish the credentialing process yourself.

The NIMS credentialing process is the best benchmarking system for a metalworking program. Your metalworking program is already designed to build the skills required by industry in your community. So, implementation of NIMS is merely the selection of the right place to position the credentialing exams in the existing curriculum.

Step 9 *You are now ready to be Certified by NIMS.* Order the Self-Study Guide from NIMS and complete the paperwork. You will be documenting the processes you have completed in each of the steps above. The paperwork should be easy to complete, as you have already finished the difficult tasks.

By using this approach to Certification you will save time and money, not to mention headaches. For example, producing a record of successful credentialing attempts on the part of the students in your program is far simpler than documenting how your curriculum meets the NIMS standards.

If you need more help with NIMS, contact the PMA Educational Foundation or the National Institute for Metalworking Skills (see page 3). They will provide you with the help you need.

References:

The **Instructors' Guide**, the **Trainee's Guide**, and **exam study guides** can be downloaded by visiting the NIMS website or by going directly to the following page:

<http://www.nims-skills.org/pages/CREDENTIALING.htm>

These documents on this page are in Acrobat® format and can be viewed or printed using Acrobat Reader®. You will also find the standards on the NIMS website.

You may contact the **PMA Educational Foundation** at:

6363 Oak Tree Boulevard; Independence, OH 44131 Tel. 216-901-8800 Fax 216-901-9190
Visit the website www.pmaef.org Email lmerrifield@pma.org Lynn Merrifield

You may contact the **National Institute for Metalworking Skills** at:

3251 Old Lee Highway, Suite 205; Fairfax, VA 22030 Tel. 703-352-4971 Fax 703-352-4991
Visit the website www.nims-skills.org Email brudolph@nims-skills.org Beverly Rudolph

A suggested checklist for planning NIMS implementation:

- ❑ Download the Instructor's and Trainer's Guide from the NIMS website.
- ❑ Review the standards and the associated performance tests.
- ❑ Select the standards that are appropriate for your program. (These are the standards you will list on your application for certification).
- ❑ Personally do each of the performance projects for the selected standards.
- ❑ Submit the performance projects to a MET-TEC for evaluation.
- ❑ Submit the Performance Affidavit, your NIMS Registration Form and the Exam Scheduling Request to NIMS.
- ❑ Take the written exams.
- ❑ Submit a list of tooling and equipment needed (if any) to your administration.
- ❑ Bring the lab up to OSHA and EPA standards if needed.
- ❑ Schedule an inspection of your lab for OSHA and EPA requirements.
- ❑ Correct any deficiencies in the lab.
- ❑ Make sure your Advisory Committee records are up to date.
- ❑ Revise your curriculum to add the NIMS benchmarks (performance tests) in the proper place.
- ❑ Start students into the Credentialing process.
- ❑ Order the Certification Self-Study
- ❑ Complete and submit the Certification Self Study paperwork.
- ❑ Schedule the NIMS audit.
- ❑ **Become Certified!** 😊