2.65 Million Reasons for FANUC Certified Education Training

With over 2.4 million CNCs and 250,000 robots installed worldwide, as well as the largest installed base in the U.S., students are more likely to use a FANUC product when they enter the workforce than any other brand. So, it only makes sense that they are taught on FANUC CNCs and robots while in school.

FANUC Certified Education Training ensures that students learn the skills that industry demands from FANUC certified instructors, using a FANUC approved curriculum on genuine FANUC equipment. Students graduate with FANUC credentials, making them more employable and productive right out of the gate.

To help train the next generation of machinists and robot operators, NCGuide Academic and ROBOGUIDE simulation packages teach realistic operation and programming through instructor demonstration, classroom exercises, homework, flipping the classroom, distance learning and CAD/CAM integration.

So, don’t compromise. Partner with the industry leader, and upgrade your educational programs with FANUC Certified Education Training. Students will stand out as champions to the thousands of employers looking for the most qualified employees.

FANUC

CNC: www.fanucfa.com ☎ 1-888-FANUC-US
Robotics: www.fanucrobotics.com ☎ 1-800-iQ-ROBOT
Sandvik Coromant is a world leader in providing productive manufacturing solutions, including high performance metal cutting tools, engineering and business services, technical training, application centers and Productivity Improvement Programs. We are committed to investing in the success of our future employees and customers by supporting technical education programs such as the Precision Machining Technology and CNC Championships at SkillsUSA, coordinated by NIMS.

Congratulations to all the participants and educators!

1-800-SANDVIK
www.sandvik.coromant.com
The Precision Metalforming Association Educational Foundation is proud to be a 2013 SkillsUSA sponsor. Your skills will help lead you to success and help the metalforming industry meet its workforce needs.

The metalforming industry uses equipment such as stamping presses, press brakes, metal spinning machines, roll forming lines, slide formers, welders, benders, turrets and lasers to form and produce metal parts which touch our lives every day. Among the many career opportunities in the industry are:

• **Production Associates** who are responsible for setting up and operating metalforming equipment.
• **Machinists and Tool & Die Makers** who use machine tools to create and maintain the tooling, fixtures, and equipment which are at the heart of metalforming.
• **Manufacturing Technology Associates** who provide engineering solutions for manufacturing design and production.
• **Maintenance Technicians** who service, troubleshoot and repair equipment.

Visit our website at www.pmaef.org/student for more information on jobs like these or contact

PMA is the full-service trade association representing the $113-billion metalforming industry of North America—the industry that creates precision metal products using stamping, fabricating and other value-added processes. Its nearly 1,000 member companies are located throughout the United States. Go to www.pma.org to find companies near you.
Welcome to the 2013 SkillsUSA Precision Machining Technology and CNC Championships.

Congratulations to all of our contestants. Each of you is a champion and has earned the right to be here in Kansas City by being the best in your home state. All of your hard work and determination has paid off. We are proud and honored to have you with us.

Congratulations to the instructors, parents, and advisors of our contestants. We thank you for giving your time, talent, dedication, and leadership in developing these state gold medalists.

We thank our sponsors, donors, judges, and volunteers. This is one of the finest examples of volunteerism in the nation. Without your efforts, hosting a competition of this scale and magnitude would not be possible.

We are extremely grateful for the officials of SkillsUSA, whose untiring efforts allow us to be part of a national endeavor to promote technical careers for America’s youth. Their vision and dedication is one reason why this country has a bright future ahead.

Our nation is facing a skills shortage that is unprecedented in modern times. The quantity of skilled workers is decreasing due to many factors, including retirement. However, these are exciting times for talented young men and women entering the global marketplace in which the only constant is change itself. Our 2013 national contestants will find no lack of opportunities or challenges as they bring their skills to America’s workforce.

We salute you for being part of the answer to this dilemma. As champions, you are becoming accustomed to facing challenges and overcoming them. As champions, you are also becoming accustomed to the rewards and privileges that accompany hard work. We are committed to building and maintaining a competitive American workforce. We look forward to you joining us in that effort.

Good luck to each of you. Be proud of what you have accomplished to reach this point in the competition. We sure are.

Best regards,

Gregory Chambers
Chairman, Board of Directors
National Institute for Metalworking Skills, Inc.
**Precision Machining Technology**

**Competition Itinerary 2013**

**Tuesday, June 25**
8:00 a.m. to 8:30 a.m.
Contestant & Sponsor Check-In
Metropolitan Community College, Business & Tech. Campus
1775 Universal Ave., Kansas City, MO 64120

8:30 a.m. to 9:30 a.m.
Special Movie Screening: The Edge Factor's *Metal & Flesh*
Metropolitan Community College, Business & Tech. Campus
1775 Universal Ave., Kansas City, MO 64120

9:45 a.m. to 10:45 a.m.
Contestant & Instructor Tutorials—Session A
Metropolitan Community College, Business & Tech. Campus
1775 Universal Ave., Kansas City, MO 64120

11:00 a.m. to 12:00 p.m.
Contestant & Instructor Tutorials—Session B
Metropolitan Community College, Business & Tech. Campus
1775 Universal Ave., Kansas City, MO 64120

12:15 p.m. to 1:30 p.m.
Contestant & Instructor Luncheon
Metropolitan Community College, Business & Tech. Campus
1775 Universal Ave., Kansas City, MO 64120

**Wednesday, June 26**
7:30 a.m. to 5:00 p.m.
Manual Machining Competition
Metropolitan Community College, Business & Tech. Campus
1775 Universal Ave., Kansas City, MO 64120

**Thursday, June 27**
7:30 a.m. to 6:00 p.m.
PMT Contest Events
Bartle Hall Convention Center

6:00 p.m. to 8:00 p.m.
Help with Contest Teardown
Bartle Hall Convention Center

**Friday, June 28**
6:00 p.m. to 10:00 p.m.
SkillsUSA 2013 Awards Ceremony
Kemper Arena—Kansas City, MO

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**Contest Scoring Criteria**

**Precision Machining Technology Contest**
Chair James A. Wall

<table>
<thead>
<tr>
<th>Skill Description</th>
<th>Maximum Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Manual Engine Lathe</td>
<td>150</td>
</tr>
<tr>
<td>3. Process Control</td>
<td>150</td>
</tr>
<tr>
<td>4. CNC Programming—Turning</td>
<td>150</td>
</tr>
<tr>
<td>5. CNC Programming—Milling</td>
<td>150</td>
</tr>
<tr>
<td>6. GD&amp;T and Metalworking Theory Exam</td>
<td>150</td>
</tr>
<tr>
<td>7. Oral Professional Development Assessment</td>
<td>100</td>
</tr>
</tbody>
</table>

**5% Penalty if resume is not submitted**

---

**Tie Breakers**
1. SkillsUSA Professional Development Program Test
2. CNC Programming—Turning
3. CNC Programming—Milling
CNC Milling & CNC Turning

Competition Itinerary 2013

Tuesday, June 25
8:00 a.m. to 8:30 a.m.
Contestant & Sponsor Check-In
Metropolitan Community College, Business & Tech. Campus
1775 Universal Ave.,
Kansas City, MO 64120

8:30 a.m. to 9:30 a.m.
Special Movie Screening:
The Edge Factor’s Metal & Flesh
Metropolitan Community College, Business & Tech. Campus
1775 Universal Ave.,
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Kansas City, MO 64120

11:00 a.m. to 12:00 p.m.
Contestant & Instructor Tutorials—Session B
Metropolitan Community College, Business & Tech. Campus
1775 Universal Ave.,
Kansas City, MO 64120

12:15 p.m. to 1:30 p.m.
Contestant & Instructor Luncheon
Metropolitan Community College, Business & Tech. Campus
1775 Universal Ave.,
Kansas City, MO 64120

2:00 p.m. to 5:00 p.m.
CNC Turning Programming Competition
Bartle Hall Convention Center

Wednesday, June 26
7:30 a.m. to 5:00 p.m.
CNC Milling & Turning Competition
Bartle Hall Convention Center

Friday, June 28
6:00 p.m. to 10:00 p.m.
SkillsUSA 2013 Awards Ceremony
Kemper Arena—Kansas City, MO

Contest Scoring Criteria

CNC Milling and CNC Turning Contests
Chair James A. Wall

Skill Description | Maximum Points
---|---
1. CNC Programming Skills | 400
2. Process Control | 200
3. CNC Theory Exam | 200
4. GD&T Exam | 100
5. Oral Professional Development Assessment | 100

5% Penalty if resume is not submitted

Tie Breakers
1. SkillsUSA Professional Development Program Test
2. CNC Programming Skills
3. CNC Theory Exam
2013 National Technical Committee

Julie Aitkens
Technical Manager
Honeywell, FM&T

Darrell Bryant
Operations Program Manager
Honeywell Aerospace

Gregory Chambers
Director of Corporate Compliance and Safety
Oberg Industries

George Crossland
President
Crossland Machinery Company

Edward Dobkins
President
Dobkins Drill Systems, Inc.

Doug Nelson
R&D Specialist
IRWIN Industrial Tool Company

Robert Page
Training and Productivity Center Manager
Sandvik Coromant Company

Scott Robinson
Leader Mangers, Tech Services
The L.S. Starrett Company

Jerry Sage
International Trade Show Coordinator
Haas Automation, Inc.

Bob Skodzinsky
HTEC Program Director
Haas Automation HTEC Network

Chuck Tate
Training Specialist
Sandvik Coromant Company

James A. Wall
Executive Director
National Institute for Metalworking Skills, Inc. (NIMS)

Kenneth Wright
President
Keller North America

Congratulations & Good Luck to All CNC and PMT Contestants!

Boston Tooling & Machining Association, Inc.
The NTMA Boston Chapter
Phone/Fax: 978-373-8073
Email: info@bostontooling.org
http://www.bostontooling.org

“We are proud to support SkillsUSA®”
Gene Haas Foundation Incentivizes Future Machinists with SkillsUSA Machining Championship Awards

Gene Haas Foundation, the philanthropic arm of Haas Automation, Inc., again funds the SkillsUSA Machining Championship Award Program.

Shortage of skilled workers? The Gene Haas Foundation, Oxnard, Calif. is taking a long-term view, investing in the future, and supporting students with a $27,000 grant to the SME Education Foundation for the SkillsUSA Machining Championship Award Program.

Peter Zierhut, representative, Gene Haas Foundation says, “Our industry is looking for employees with specific skill sets, and very often a rare combination of skill sets. Students competing at the SkillsUSA Championship this summer will be using our advanced manufacturing equipment, be monitored and judged by engineers, learn from their peers, and meet future employers. The industry needs to spend more time directing young people while they’re still in school where we can make a difference.”

Gold Medal winners from SkillsUSA state competitions – high school and post-secondary, will compete against each other and the clock in creating manufacturing parts using these skills: manual turning, manual lathe, CNC programming – turning, and CNC Programming – milling.

Haas Automation and Sandvik Coromant, both technical and hardware sponsors and the National Institute for Metalworking Skills (NIMS) are sponsoring the Precision Machining Technology, CNC Milling and CNC Turning Contests. Forty-eight (48) Haas CNC Simulators will be used for the three CNC contests, along with a Haas Mini Mill and Haas ST 10 Lathe.

The Gene Haas SkillsUSA Machining Championship Award certificates will be presented to 18 national medal winners at the Awards Ceremony on June 28 in these amounts:

- **Gold**: $2,000
- **Silver**: $1,500
- **Bronze**: $1,000

The 2013 SkillsUSA Machining Championship Award program will be administered by the SME Education Foundation. Winning medalists will receive the designated amount to support continued learning by submitting their application and award certificate to the SME Education Foundation. The Foundation will then send designated award funding directly to the medalists’ respective schools.
Proudly sponsors the 2013 National CNC Milling, CNC Turning, and Precision Machining Technology Competitions.

Best of luck to all contestants!

YOU ARE THE FUTURE
PRECISION MACHINING TECHNOLOGY has been carefully written to align with the National Institute of Metalworking Skills (NIMS) Machining Level I Standard and to support achievement of NIMS credentials.

This new text carries NIMS’ exclusive endorsement and recommendation for use in NIMS-accredited Machining Level I Programs. It’s the ideal way to introduce students to the excitement of today’s machine tool industry and provide a solid understanding of fundamental and intermediate machining skills needed for successful 21st Century careers. With an emphasis on safety throughout and a fresh view of the role of modern machining in today’s economic environment, this book covers such topics as the basics of hand tools, job planning, benchwork, layout operations, drill press, milling and grinding processes, and CNC. The companion Workbook/Shop Manual contains helpful review material to ensure that readers have mastered key concepts and provides guided practice operations and projects on a wide range of machine tools that will enhance their NIMS credentialing success.

Features of this book

- Written in an easy to read and understand manner that meets the needs and capabilities of students with little or no technical background.
- Contains detailed four-color photographs and illustrations that show many step-by-step procedures, making the material easier for students to understand.
- Includes current CNC content.

Supplements

Instructor Resources CD-ROM
Provides ExamView® computerized test bank, lecture slides created in PowerPoint® that present the highlights of each chapter, Lesson Plans, NIMS correlations, Image Library of images taken from the text, and an Answer Key to the end of chapter review questions.

Workbook/Projects Manual
ISBN: 978-1-4354-4768-4
Reinforces the text and offers practical “hands on” learning exercises and use of critical thinking skills. It contains helpful review material to ensure that students have mastered key concepts in the book, guided practice operations and projects on a wide range of machine tools that will enhance their NIMS credentialing success.

Contents

SECTION I: INTRODUCTION TO MACHINING
1. Introduction to Machining
2. Careers in Machining
3. Workplace Skills

SECTION II: MEASUREMENT, MATERIALS, AND SAFETY
1. Introduction to Safety
2. Measurement Systems and Machine Tool Math Overview
3. Semi-Precision Measurement
4. Precision Measurement
5. Quality Assurance, Process Planning, and Quality Control
6. Metal Composition and Classification
7. Heat Treatment of Metals
8. Maintenance, Lubrication, and Cutting Fluid Overview

SECTION III: JOB PLANNING, BENCHWORK, AND LAYOUT
1. Understanding Drawings
2. Layout
3. Hand Tools
4. Saws and Cut-Off Machine
5. Offhand Grinding
6. Drilling, Threading, Tapping and Reaming

SECTION IV: DRILL PRESS
1. Introduction to the Drill Presses
2. Tools, Toolholding, and Workholding for the Drill Press
3. Drill Press Operations

SECTION V: TURNING
1. Introduction to the Lathe
2. Work and Tool Holding Devices for the Lathe
3. Machining Operations on the Lathe
4. Manual Lathe Threading
5. Taper Turning

SECTION VI: MILLING
1. Introduction to the Vertical Milling Machine
2. Tools, Toolholding, and Work Holding for the Vertical Milling Machine
4. Indexing and Rotary Table Operations

SECTION VII: GRINDING
1. Introduction to Precision Grinding Machines
2. Grinding Wheels for Precision Grinding
3. Surface Grinding Operations

SECTION VIII: COMPUTER NUMERICAL CONTROL
1. CNC Basics
2. Introduction to CNC Training
3. CNC Turning: Programming
4. CNC Turning: Set-up and Operation
5. Introduction to CNC Milling
6. CNC Milling: Programming
7. CNC Milling: Set-up and Operation
8. Computer Aided Design and Computer Aided Machining
**Precision Machining Technology: Technical Contest Schedule**

### Wednesday, June 26 — Metropolitan Community College Business & Technology Campus

<table>
<thead>
<tr>
<th>Time</th>
<th>Group A</th>
<th>Group B</th>
<th>Group C</th>
<th>Group D</th>
<th>Group E</th>
<th>Group F</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 - 9:10 a.m.</td>
<td>Lathe</td>
<td>Mill</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:15 - 10:25 a.m.</td>
<td>Mill</td>
<td>Lathe</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:30 - 11:40 a.m.</td>
<td></td>
<td></td>
<td>Lathe</td>
<td></td>
<td></td>
<td>Mill</td>
</tr>
<tr>
<td>11:40 - 12:10 p.m.</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
</tr>
<tr>
<td>12:10 - 1:20 p.m.</td>
<td></td>
<td></td>
<td></td>
<td>Mill</td>
<td>Lathe</td>
<td></td>
</tr>
<tr>
<td>1:25 - 2:35 p.m.</td>
<td></td>
<td></td>
<td></td>
<td>Mill</td>
<td>Lathe</td>
<td></td>
</tr>
<tr>
<td>2:40 - 3:50 p.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mill</td>
<td></td>
</tr>
<tr>
<td>3:55 - 5:05 p.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lathe</td>
</tr>
</tbody>
</table>

**Notes:** No more than 14 contestants are assigned to each group (A through F). All competition sections will be seventy minutes and a thirty minute lunch break will occur at 11:40 a.m.

Monday’s contest will begin at 8:00 a.m. sharp and finish by 5:05 p.m. Buses will be available at Bartle Hall throughout the day to transport contestants and advisors to the Metropolitan Community College Business & Technology Campus. Those in Group A and Group B should plan to board the early bus to arrive at the community college in plenty of time for the 8:00 a.m. start.

### Thursday, June 27 — Bartle Hall Convention Center

<table>
<thead>
<tr>
<th>Time</th>
<th>Group A</th>
<th>Group B</th>
<th>Group C</th>
<th>Group D</th>
<th>Group E</th>
<th>Group F</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 - 9:20 a.m.</td>
<td>CNC Turning</td>
<td>Process Control</td>
<td>Related Theory</td>
<td>CNC Milling</td>
<td>Focus Group</td>
<td>GD&amp;T Exam</td>
</tr>
<tr>
<td>9:20 - 10:40 a.m.</td>
<td>Process Control</td>
<td>Related Theory</td>
<td>CNC Milling</td>
<td>Focus Group</td>
<td>GD&amp;T Exam</td>
<td>CNC Turning</td>
</tr>
<tr>
<td>10:40 - 10:50 a.m.</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
</tr>
<tr>
<td>10:50 - 12:10 p.m.</td>
<td>Related Theory</td>
<td>CNC Milling</td>
<td>Focus Group</td>
<td>GD&amp;T Exam</td>
<td>CNC Turning</td>
<td>Process Control</td>
</tr>
<tr>
<td>12:10 - 12:40 p.m.</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
</tr>
<tr>
<td>12:40 - 2:00 p.m.</td>
<td>CNC Milling</td>
<td>Focus Group</td>
<td>GD&amp;T Exam</td>
<td>CNC Turning</td>
<td>Process Control</td>
<td>Related Theory</td>
</tr>
<tr>
<td>2:00 - 2:10 p.m.</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
<td>Break</td>
</tr>
<tr>
<td>2:10 - 3:30 p.m.</td>
<td>Focus Group</td>
<td>GD&amp;T Exam</td>
<td>CNC Turning</td>
<td>Process Control</td>
<td>Related Theory</td>
<td>CNC Milling</td>
</tr>
<tr>
<td>3:30 - 4:50 p.m.</td>
<td>GD&amp;T Exam</td>
<td>CNC Turning</td>
<td>Process Control</td>
<td>Related Theory</td>
<td>CNC Milling</td>
<td>Focus Group</td>
</tr>
</tbody>
</table>

**Notes:** No more than 14 contestants are assigned to each group (A through F). Tuesday’s contest will begin at 8:00 a.m. sharp and finish by 4:50 p.m. All competition sections will be one hour and twenty minutes. Two 10-minute rest periods will occur, as well as a lunch break from 12:10—12:40p.m.
CNC Milling & CNC Turning — Technical Contest Schedule

Tuesday, June 25 — Bartle Hall Convention Center

<table>
<thead>
<tr>
<th>Time</th>
<th>CNC Turning Group A</th>
<th>CNC Turning Group B</th>
<th>CNC Turning Group C</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:00 - 5:00 p.m.</td>
<td>Programming</td>
<td>Programming</td>
<td>Programming</td>
</tr>
</tbody>
</table>

Notes: No more than 14 contestants are assigned to each CNC Turning Group (A through C). All groups will be given three hours to complete the programming event at Bartle Hall.

Sunday’s contest will begin at 2:00 p.m. sharp and finish by 5:00 p.m.

Wednesday, June 26 — Bartle Hall Convention Center

<table>
<thead>
<tr>
<th>Time</th>
<th>CNC Milling Group A</th>
<th>CNC Milling Group B</th>
<th>CNC Milling Group C</th>
<th>CNC Turning Group A</th>
<th>CNC Turning Group B</th>
<th>CNC Turning Group C</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:10 - 9:30 a.m.</td>
<td>Programming</td>
<td>Programming</td>
<td>GD&amp;T Exam</td>
<td>Process Control</td>
<td>Related Theory</td>
<td></td>
</tr>
<tr>
<td>9:35 - 10:55 a.m.</td>
<td>Programming</td>
<td>Programming</td>
<td>Process Control</td>
<td>Related Theory</td>
<td>GD&amp;T Exam</td>
<td></td>
</tr>
<tr>
<td>11:00 - 12:20 p.m.</td>
<td>Programming</td>
<td>Programming</td>
<td>Related Theory Exam</td>
<td>GD&amp;T Exam</td>
<td>Process Control</td>
<td></td>
</tr>
<tr>
<td>12:20 - 12:50 p.m.</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
</tr>
<tr>
<td>12:50 - 2:10 p.m.</td>
<td>Process Control</td>
<td>GD&amp;T Exam</td>
<td>Programming</td>
<td></td>
<td></td>
<td>Related Theory</td>
</tr>
<tr>
<td>2:15 - 3:35 p.m.</td>
<td>Related Theory</td>
<td>Process Control</td>
<td>Programming</td>
<td></td>
<td></td>
<td>GD&amp;T Exam</td>
</tr>
<tr>
<td>3:40 - 5:00 p.m.</td>
<td>GD&amp;T Exam</td>
<td>Related Theory</td>
<td>Programming</td>
<td></td>
<td></td>
<td>Process Control</td>
</tr>
</tbody>
</table>

Notes: No more than 14 contestants are assigned to each CNC Milling Group (A through C). No more than 14 contestants are assigned to each CNC Turning Group (A through C). Monday’s contest will begin at 8:10 a.m. sharp and finish by 5:00 p.m. All competition sections will be one hour and twenty minutes. A lunch break will occur from 12:20—12:50p.m.
Industry Judges—By Assignment

**CNC Programming—Milling**

- Chris Bien
  Immersive Engineering
- Mike Hamilton
  Haas Factory Outlet
- Sal Martinez
  Haas Automation, Inc.
- Robert Nash
  Vincennes University
- Kenneth Potts
  Jeffreys MFG
- Jerry Sage
  Haas Automation, Inc.

**CNC Programming—Turning**

- Edward Cross
  Cooperative Ventures of Indiana
- Ernesto Flores
  Haas Automation, Inc.
- Steve Halloran
  Haas Factory Outlet
- Fred Joseph
  Phillips Corporation
- Patrick Sayn
  Immersive Engineering
- Daniel Scott (Team Leader)
  Haas Automation, Inc.
- Peter Zierhut
  Haas Automation, Inc.

**Manual Milling Machine Operation**

- Edward Dobkins (Team Leader)
  Dobkins Drill System, Inc.
- Brett Griffith
  Honeywell FM&T
- Brian Lasker
  R&D Leverage
- Chris Lavery
  R&D Leverage
- Dave Logsdon
  R&D Leverage
- Tony Nguyen
  Honeywell FM&T
- Carl Snider
  R&D Leverage

**Manual Engine Lathe Operation**

- Travis Crossland (Team Leader)
  Crossland Machinery
- Kenneth Dwyer
  Neosho Industrial Supply, Inc.
- Jason Falkner
  Oberg Industries, Inc.
- David Howard
  Howard Machine
- Jim Martin
  R&D Leverage
- Doug Nelson
  IRWIN Tools
- Anne Piccinini
  R&D Leverage

**Process Control & Precision Measurement**

- Steve Akey
  The L.S. Starrett Company
- David Brumfield
  The L.S. Starrett Company
- Travis Crossland
  Crossland Machinery
- Craig Hickerson
  The L.S. Starrett Company
- Greg Jones
  AMT—The Association for Manufacturing Technology

**Professional Development**

- Julie Aitkens (Team Leader)
  Honeywell FM&T
- Jessica Bailey
  Honeywell FM&T
- Don Watson
  Honeywell FM&T
## Competition Administrative Team

### Overall Team Leaders
- **Gregory Chambers**
  - Chairman
  - NIMS Board of Directors
- **James A. Wall**
  - Executive Director
  - NIMS

### Cutting Tool Coordinators
- **David Brendel**
  - Productivity Engineer
  - Sandvik Coromant Company
- **Rob Page**
  - Manager
  - Sandvik Coromant Company

### Machine Setup & Technical Support
- **George Crossland**
  - President
  - Crossland Machinery Company
- **Travis Crossland**
  - Vice President
  - Crossland Machinery Company
- **Jerry Sage**
  - International Trade Show Coordinator
  - Haas Automation, Inc.

### Score Keeper / Time Keeper
- **Gregory Chambers**
  - Chairman
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- **Nicole Sgueglia**
  - Associate Product Manager
  - Cengage Learning

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  - Machine Tool Instructor
  - Metropolitan Community College
- **David Hawkins**
  - Instructor / Lab Specialist
  - Metropolitan Community College
- **Mark Moehlman**
  - Instructor
  - Kansas City Kansas Community College
- **Penny Tepesch**
  - Manufacturing Tech
  - Metropolitan Community College
- **Tom Wheeler**
  - Dean
  - Metropolitan Community College

### Focus Group
- **Dennis Bray**
  - Society of Manufacturing Engineers (SME)
- **Pam Hurt**
  - Society of Manufacturing Engineers (SME)
- **Kathy Looman**
  - Society of Manufacturing Engineers (SME)
- **Kevin McCormick**
  - Society of Manufacturing Engineers (SME)
- **Deborah Robbins**
  - Society of Manufacturing Engineers (SME)
- **Mark Tomlinson**
  - Society of Manufacturing Engineers (SME)

### National Education Team
- **Robert Swordy**
  - Precision Machine Tech Teacher
  - Hillyard Technical Center
- **James Wiley**
  - Instructor
  - York Institute

### NIMS Staff
- **James A. Wall**
  - Executive Director
- **Kristie Doyle**
  - Credentialing Specialist
- **Montez King**
  - Director of Credentials
- **Dave Morgan**
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- **Catherine Ross**
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Precision Metalforming Association Education Foundation (PMA EF)
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Cutting Tools for Contestants

Society of Manufacturing Engineers (SME)
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Southern Manufacturing Technologies
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The L.S. Starrett Company
Measuring Tools for Contestants

TCI Precision Metals
Raw Materials

Participating Companies & Organizations—Contact Information

Association for Manufacturing Technology (AMT)
McLean, VA
www.amtonline.org

Boston Centerless
Woburn, MA
www.bostoncenterless.com

Boston Tooling & Machining Association, Inc.
Haverhill, MA
www.bostontoolling.org

Calculated Industries
MachinistCalcPro
www.calculated.com

Crossland Machinery Company, Inc.
Kansas City, MO
www.crossland.com

Delmar Cengage Learning
Independence, KY
www.delmar.cengage.com

Dobkins Drill System, Inc.
Hutchinson, KS
(620) 663-7989

Haas Automation, Inc.
Oxnard, CA
www.haascnc.com

Honeywell FM&T
Kansas City, MO
www.honeywell.com

Howard Machine
Carthage, MO
(417) 358-7143

Immersive Engineering
Bloomfield Hills, MI
www.immerse2learn.com

Industrial Press, Inc.
New York, NY
www.industrialpress.com

Irwin Industrial Tools
Huntersville, NC
www.irwin.com

Metropolitan Community College—Business & Technology Campus
Kansas City, MO
www.mcckc.edu/mccbtc

National Institute for Metalworking Skills, Inc. (NIMS)
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www.nims-skills.org

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Neosho, MO
www.neoshoinudstrial.com

Oberg Industries, Inc.
Freeport, PA
www.oberg.com

Precision Metalforming
Association Educational
Foundation (PMA EF)
Independence, OH
www.pma.org

R&D Leverage
Lee’s Summit, MO
www.rdtool.com

Sandvik Coromant Company
Fair Lawn, NJ
www.coromant.sandvik.com

Siemens Industry, Inc.

Elk Grove Village, IL
www.usa.siemens.com

Society of Manufacturing
Engineers (SME)
Dearborn, MI
www.sme.org

Southern Manufacturing
Technologies, Inc.
Tampa, FL
www.smt-tampa.com

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