

APPENDIX E

APPRENTICESHIP ASSESSMENT PROCESS

The goal of the *NIMS Competency-Based Apprenticeship System* is to implement a “value added” assessment process that utilizes the same series of forms to plan, track, and assess the apprentice’s on-the-job learning, related instruction, the attainment of Core Competencies, company specific competencies, and corresponding NIMS Credentials, and company specific job performance criteria.

This *Apprenticeship Record* will document completion of the requirements as established in these Standards, and will be used to initiate the request for a *Certificate of Completion of Apprenticeship*. The Core Competencies and corresponding NIMS Credentials, and criteria for awarding a *NIMS Certificate of Completion*, will be consistent for all apprentices registered for each NIMS Certified Occupation. The Apprenticeship Sponsor will determine the related instruction requirements, job performance criteria, and company specific competencies, as deemed necessary to develop a level of competency and proficiency equivalent to a journeyworker level employee.

APPENDIX E

APPRENTICESHIP ASSESSMENT PROCESS

This Appendix is attached to and a part of these Standards for the following identified occupations.

APPENDIX	OCCUPATION
Appendix E.1	NIMS Certified Machinist
Appendix E.2	NIMS Certified Machine Builder
Appendix E.3	NIMS Certified Mold Maker
Appendix E.4	NIMS Certified Tool & Die Maker - Stamping
Appendix E.5	NIMS Certified Tool Maker
Appendix E.6	NIMS Certified Master Level Tool Maker
Appendix E.7	NIMS Certified Press Setup and Operation - Stamping
Appendix E.8	NIMS Certified Machine Maintenance, Service, and Repair
Appendix E.9	NIMS Certified CNC Operator - Turning
Appendix E.10	NIMS Certified CNC Setup / Operator - Turning
Appendix E.11	NIMS Certified CNC Setup / Programmer - Turning
Appendix E.12	NIMS Certified Master Level CNC Setup / Programmer - Turning
Appendix E.13	NIMS Certified CNC Operator - Milling
Appendix E.14	NIMS Certified CNC Setup / Operator - Milling
Appendix E.15	NIMS Certified CNC Setup / Programmer - Milling
Appendix E.16	NIMS Certified CNC Setup / Programmer - Milling and Turning

APPENDIX E.1

NIMS CERTIFIED MACHINIST ASSESSMENT PROCESS

NIMS document NIMS COMPETENCY BASED APPRENTICESHIP SYSTEM EST 2009
NIMS CERTIFIED MACHINIST CORE COMPETENCY ASSESSMENT FORM

APPRENTICE: _____ EMPLOYEE NUMBER: _____
 SUPERVISOR: _____ DEPARTMENT: _____

INSTRUCTIONS: Check-off each Core Competency as the apprentice demonstrates a level of proficiency that is equivalent to a journeyworker level employee.

NIMS CERTIFIED MACHINIST CORE COMPETENCIES

1.	Identify and Demonstrate Usage of Machine Safety and Personal Protective Equipment	
2.	Demonstrate Compliance with Lock-out / Tag-out Procedures and OSHA Requirements and Guidelines	
3.	Machine Operations and Material Handling, Hazardous Materials Handling and Storage, including EPA, Hazmat, and OSHA	
4.	Part Inspection	
5.	Process Control	
6.	Process Adjustment – Single Part Production	
7.	Participation in Processes Improvement	
8.	Manual Operations: Layout	
9.	Manual Operations: Benchwork	
10.	Sawing	
11.	Job Process Planning	
12.	Drilling Operations	
13.	Turning Operations: Turning Between Centers - Level I Machining Skills	
14.	Turning Operations: Turning Between Centers - Level II Machining Skills	
15.	Turning Operations: Chucking - Level I Machining Skills	
16.	Turning Operations: Chucking - Level II Machining Skills	
17.	Milling: Square Up a Block	
18.	Manual Milling: Vertical and Horizontal - Level I Machining Skills	
19.	Manual Milling: Vertical and Horizontal - Level II Machining Skills	
20.	Surface Grinding, Grinding Wheel Safety	
21.	Surface Grinding, Horizontal Spindle, Reciprocating Table - Level I Machining Skills	
22.	Surface Grinding, Horizontal Spindle, Reciprocating Table - Level II Machining Skills	
23.	CNC Programming - Milling and / or CNC Programming - Turning - Level I Machining Skills	
24.	CNC: Write a Simple CNC Milling and / or CNC Turning Program and Review Tool Path - Level I	
25.	CNC: Operate a CNC Milling Machine and / or Operate a CNC Lathe - Level I Machining Skills	
26.	General Housekeeping & Maintenance	
27.	Preventative Maintenance - Machine Tools	
28.	Tooling Maintenance	

COMMENTS: _____

APPRENTICE'S SIGNATURE: _____ DATE: _____

SUPERVISOR'S SIGNATURE: _____ DATE: _____

**NIMS COMPETENCY BASED APPRENTICESHIP SYSTEM
NIMS CERTIFIED MACHINIST CORE COMPETENCY RECORD**

APPRENTICE: _____ EMPLOYEE NUMBER: _____
 SUPERVISOR: _____ DEPARTMENT: _____

INSTRUCTIONS: Provide the *Date the Training Started* for each NIMS Core Competency, the *Date the NIMS Core Competency was attained*, and the *Approximate Training Hours* required for the apprentice to attain each NIMS Core Competency.

NIMS CERTIFIED MACHINIST CORE COMPETENCIES		APPROXIMATE HOURS
1. Identify and Demonstrate Usage of Machine Safety and Personal Protective Equipment		200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
2. Demonstrate Compliance with Lock-out / Tag-out Procedures and OSHA Requirements and Guidelines		200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
3. Machine Operations and Material Handling, Hazardous Materials Handling and Storage, including EPA, Hazmat, and OSHA		200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
4. Part Inspection		200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
5. Process Control		200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS

NIMS CREDENTIALS ALIGNED WITH CORE COMPETENCIES		APPROXIMATE HOURS
6. Process Adjustment – Single Part Production		200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
7. Participation in Processes Improvement		200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
8. Manual Operations: Layout		200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
9. Manual Operations: Benchwork		200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
10. Sawing		200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
11. Job Process Planning		200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
12. Drilling Operations		200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
13. Turning Operations: Turning Between Centers - Level I Machining Skills		200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS

NIMS CREDENTIALS ALIGNED WITH CORE COMPETENCIES		APPROXIMATE HOURS
14. Turning Operations: Turning Between Centers - Level II Machining Skills		200
_____ DATE TRAINING STARTED	_____ DATE COMPETENCY ATTAINED	_____ APPROXIMATE TRAINING HOURS
15. Turning Operations: Chucking - Level I Machining Skills		200
_____ DATE TRAINING STARTED	_____ DATE COMPETENCY ATTAINED	_____ APPROXIMATE TRAINING HOURS
16. Turning Operations: Chucking - Level II Machining Skills		200
_____ DATE TRAINING STARTED	_____ DATE COMPETENCY ATTAINED	_____ APPROXIMATE TRAINING HOURS
17. Milling: Square Up a Block		200
_____ DATE TRAINING STARTED	_____ DATE COMPETENCY ATTAINED	_____ APPROXIMATE TRAINING HOURS
18. Manual Milling: Vertical and Horizontal - Level I Machining Skills		200
_____ DATE TRAINING STARTED	_____ DATE COMPETENCY ATTAINED	_____ APPROXIMATE TRAINING HOURS
19. Manual Milling: Vertical and Horizontal - Level II Machining Skills		200
_____ DATE TRAINING STARTED	_____ DATE COMPETENCY ATTAINED	_____ APPROXIMATE TRAINING HOURS
20. Surface Grinding, Grinding Wheel Safety		200
_____ DATE TRAINING STARTED	_____ DATE COMPETENCY ATTAINED	_____ APPROXIMATE TRAINING HOURS
21. Surface Grinding, Horizontal Spindle, Reciprocating Table - Level I Machining Skills		200
_____ DATE TRAINING STARTED	_____ DATE COMPETENCY ATTAINED	_____ APPROXIMATE TRAINING HOURS

NIMS CREDENTIALS ALIGNED WITH CORE COMPETENCIES		APPROXIMATE HOURS
22.	Surface Grinding, Horizontal Spindle, Reciprocating Table - Level II Machining Skills	200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
23.	CNC Programming - Milling and / or CNC Programming - Turning	200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
24.	CNC: Write a Simple CNC Milling and / or CNC Turning Program and Review Tool Path	200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
25.	CNC: Operate a CNC Milling Machine and / or Operate a CNC Lathe	200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
26.	General Housekeeping & Maintenance	200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
27.	Preventative Maintenance - Machine Tools	200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS
28.	Tooling Maintenance	200
_____	_____	_____
DATE TRAINING STARTED	DATE COMPETENCY ATTAINED	APPROXIMATE TRAINING HOURS

NOTE: The requirement for the NIMS Certified Machinist is to attain either the CNC Milling - Level I Machining Skills Credential, or the CNC Turning - Level I Machining Skills Credential.

**NIMS COMPETENCY BASED APPRENTICESHIP SYSTEM
NIMS CERTIFIED MACHINIST COMPANY SPECIFIC COMPETENCY RECORD**

APPRENTICE: _____ EMPLOYEE NUMBER: _____

SUPERVISOR: _____ DEPARTMENT: _____

INSTRUCTIONS: Provide the *Date the Training Started* for each company specific competency, the *Date the Competency was attained*, and the *Approximate Training Hours* required for the apprentice to attain each company specific competency.

COMPANY SPECIFIC COMPETENCIES		APPROXIMATE HOURS
29.		
_____ DATE TRAINING STARTED	_____ DATE COMPETENCY ATTAINED	_____ APPROXIMATE TRAINING HOURS
30.		
_____ DATE TRAINING STARTED	_____ DATE COMPETENCY ATTAINED	_____ APPROXIMATE TRAINING HOURS
31.		
_____ DATE TRAINING STARTED	_____ DATE COMPETENCY ATTAINED	_____ APPROXIMATE TRAINING HOURS
32.		
_____ DATE TRAINING STARTED	_____ DATE COMPETENCY ATTAINED	_____ APPROXIMATE TRAINING HOURS
33.		
_____ DATE TRAINING STARTED	_____ DATE COMPETENCY ATTAINED	_____ APPROXIMATE TRAINING HOURS

COMPANY SPECIFIC COMPETENCIES

APPROXIMATE HOURS

34.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

35.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

36.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

37.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

38.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

39.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

40.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

41.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

COMPANY SPECIFIC COMPETENCIES

APPROXIMATE
HOURS

42.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

43.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

44.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

45.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

46.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

47.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

48.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

49.

DATE TRAINING STARTED DATE COMPETENCY ATTAINED APPROXIMATE TRAINING HOURS

COMPANY SPECIFIC COMPETENCIES

APPROXIMATE
HOURS

50.

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51.

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52.

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53.

<hr/> DATE TRAINING STARTED	<hr/> DATE COMPETENCY ATTAINED	<hr/> APPROXIMATE TRAINING HOURS
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54.

<hr/> DATE TRAINING STARTED	<hr/> DATE COMPETENCY ATTAINED	<hr/> APPROXIMATE TRAINING HOURS
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55.

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56.

<hr/> DATE TRAINING STARTED	<hr/> DATE COMPETENCY ATTAINED	<hr/> APPROXIMATE TRAINING HOURS
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NIMS document to be completed by the apprentice
NIMS COMPETENCY BASED APPRENTICESHIP SYSTEM EST 2009
NIMS CERTIFIED MACHINIST RELATED INSTRUCTION RECORD

APPRENTICE: _____ EMPLOYEE NUMBER: _____
 SUPERVISOR: _____ DEPARTMENT: _____

INSTRUCTIONS: Check-off each completed Related Instruction Course. Satisfactory completion may be determined by the apprentice's ability to attain the required Core and company specific competencies and corresponding NIMS Credentials.

NIMS CERTIFIED MACHINIST RELATED INSTRUCTION COURSES

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28.		

COMMENTS: _____

APPRENTICE'S SIGNATURE: _____ DATE: _____

SUPERVISOR'S SIGNATURE: _____ DATE: _____

NIMS document NIMS COMPETENCY BASED APPRENTICESHIP SYSTEM EST 2009
NIMS CERTIFIED MACHINIST CREDENTIALING RECORD

APPRENTICE: _____ EMPLOYEE NUMBER: _____
 SUPERVISOR: _____ DEPARTMENT: _____

INSTRUCTIONS: Check-off the NIMS Credential when the apprentice meets both the hands-on assessment and theoretical examination requirements and is awarded the NIMS Credential.

NIMS CREDENTIALS ALIGNED WITH CORE COMPETENCIES

1.	Measurement, Materials, and Safety - Level I Machining Skills	
2.	Job Planning, Benchwork, and Layout - Level I Machining Skills	
3.	Drill Press Skills - Level I Machining Skills	
4.	Turning Between Centers - Level I Machining Skills	
5.	Turning Between Centers - Level II Machining Skills	
6.	Turning Operations: Chucking - Level I Machining Skills	
7.	Turning Operations: Chucking - Level II Machining Skills	
8.	Manual Milling Skills - Level I Machining Skills	
9.	Manual Milling Skills - Level II Machining Skills	
10.	Grinding Skills - Level I Machining Skills	
11.	Grinding Skills - Level II Machining Skills	
12.	CNC Milling and / or CNC Turning - Level I Machining Skills	
	NIMS CREDENTIALS ALIGNED WITH COMPANY SPECIFIC COMPETENCIES	
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14.		
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COMMENTS: _____

APPRENTICE'S SIGNATURE: _____ DATE: _____
 SUPERVISOR'S SIGNATURE: _____ DATE: _____

