

**APPENDIX**  
**A.1**

**CORE COMPETENCY REQUIREMENTS AND NIMS CREDENTIALS**  
**NIMS CERTIFIED MACHINIST**

**CORE COMPETENCY**  
**REQUIREMENTS:**  
**NIMS CERTIFIED**  
**MACHINIST**

<b>APPRENTICE CORE COMPETENCIES</b>		<b>NIMS CREDENTIALS</b>
1. Identify and Demonstrate Use 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		Measurement, Materials, and Safety Level I
8. Manual Operations: Layout 9. Manual Operations: Benchwork 10. Sawing 11. Job Process Planning		Job Planning, Benchwork, and Layout Level I
12. Drilling Operations		Drill Press Skills Level I
13. Turning Operations: Turning Between Centers		Turning Between Centers Level I
14. Turning Operations: Turning Between Centers		Turning Between Centers Level II
15. Turning Operations: Chucking		Chucking Level I
16. Turning Operations: Chucking		Chucking Level II
17. Milling: Square Up a Block		Milling Level I
18. Manual Milling: Vertical and Horizontal		Milling Level II
19. Manual Milling: Vertical and Horizontal		Milling Level II
20. Surface Grinding, Grinding Wheel Safety (Optional)		Grinding Level I
21. Surface Grinding, Horizontal Spindle, Reciprocating Table (Optional)		Grinding Level II
22. Surface Grinding, Horizontal Spindle, Reciprocating Table (Optional)		Grinding Level II
23. CNC Programming - Milling and / or CNC Programming - Turning		CNC Milling and / or CNC Turning Level I
24. CNC: Write a Simple CNC Milling and / or CNC Turning Program and Review Tool Path		CNC Milling and / or CNC Turning Level I
25. CNC: Operate a CNC Milling Machine and / or Operate a CNC Lathe		CNC Milling and / or CNC Turning Level I
26. General Housekeeping & Maintenance		Included in all Machining Credentials
27. Preventative Maintenance - Machine Tools		Included in all Machining Credentials
28. Tooling Maintenance		Included in all Machining Credentials

**\*NOTE: There is not a specific sequence to the implementation of the Core Competencies. The twenty eight Core Competencies and the twelve NIMS Credentials, listed above, must be satisfactorily completed to meet the requirements of a NIMS Certified Apprentice Apprenticeship Program and earn a *Certificate of Completion*.**