Correlation of

CNC Manufacturing Technology, Calverley

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to

NIMS Classic Credential: CNC Mill Operations

The following chart correlates the National Institute for Metalworking Skills (NIMS) knowledge and skills standards for the CNC Mill Operations credential to the *CNC Manufacturing Technology* textbook. Listed are the knowledge and skills criteria for NIMS credentialing for CNC Mill Operations, and the corresponding/applicable content from *CNC Manufacturing Technology*.



Each NIMS credential represents a collection of skills and knowledge, and an individual who earns one has demonstrated competency in that occupational area. Individuals who earn one or more credentials show that they have an array of skills that have been verified against an industry-written standard.

Knowledge and Skills	G-W Content
CNC Mill Operations	
Applied Mathematics	
Arithmetic	Chapter 4
IPM Calculations	Chapter 4
SFM to RPM Conversion	Chapter 4

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Knowledge and Skills	G-W Content
Sign Numbers	Chapter 4
Use of Scientific Calculator	Chapter 4
Cutting Tool Assembly	
Configuration (LOC and EOH)	Chapter 9
Fitting (tightening and setting)	Chapter 8
Holder Applications	Chapters 8, 9
Inspection of Cutters	Chapter 8
Inspection of Holders	Chapter 8
Geometrical Dimensioning and Tolerancing	
Feature Control Frame	Chapter 5
Geometric Control Symbols	Chapter 5
Geometric Tolerancing Categories	Chapter 5
Geometric Tolerancing Characteristics	Chapter 5
Geometric Tolerancing Zone Shapes	Chapter 5
Symbols Associated with Feature Control Frames	Chapter 5
Inspection	
Feature with Size Verification	Chapter 6
Feature without Size Verification	Chapter 6
Flatness Verification	Chapter 6
Hole Gaging	Chapter 6
Perpendicularity Verification	Chapter 6
Position Verification	Chapter 6
Profile of a Surface Verification	Chapter 6
Surface Finish Verification	Chapter 6
Machine Maintenance	
Coolants	Chapters 3, 10
Oils and Lubrications	Chapters 3, 8, 10
Refractometer Readings	
Machine Safety	
Machine Guarding	Chapter 3
Machining Applications	
Drilling	Chapters 9, 12

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Knowledge and Skills	G-W Content
Face Milling	Chapters 9, 12
Peripheral Milling	Chapters 9, 12
Pocket Milling	Chapters 9, 12
Reaming	Chapter 9
Tapping	Chapters 9, 12
Measurements	
Reading Micrometers	Chapter 6
Reading Steel Rules	Chapter 6
Reading Vernier Scales	Chapter 6
Use of Calipers	Chapter 6
Use of Dial Indicators	Chapter 6
Use of Drop Indicators (travel dial)	Chapter 6
Use of Micrometers	Chapter 6
Use of Steel Rules	Chapter 6
Operations	
Deburring	Chapter 6
Fixture Offset Adjustments	Chapter 9
Geometry Offset Adjustments	Chapter 9
Machine Controls	Chapter 9
Machine Startup and Shutdown	Chapter 9
Machine Warm Up	Chapter 9
Part Loading (vise/fixture)	Chapters 1, 9
Tool Height Offset Adjustments	Chapter 9
Print Reading	
Block Tolerances	Chapter 5
Line Types and Conventions	Chapter 5
Orthographic Projection	Chapter 5
Surface Finish Requirements	Chapter 5
Title Blocks and Revisions	Chapter 5
Shop Safety	
Blood Born Pathogen	Chapter 3
Fire Prevention/Suppression	Chapter 3

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Knowledge and Skills	G-W Content
Hazardous Material Information System (HMIS)	Chapter 3
Lock Out/Tag Out	Chapter 3
Personal Protective Equipment (PPE)	Chapter 3
Safety Data Sheets (SDS)	Chapter 3
Waste Removal	Chapter 3

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