

Appendix E
NTMA-U Apprenticeship Record 1



THE NTMA-U APPRENTICESHIP RECORD BOOK

The web-based / online learning NTMA-U Apprenticeship Record Book is developed in partnership with the NTMA Member Company, and the National Tooling and Machining Association.

APPRENTICES

This is the official record of your Apprentice Training and Practical Work Experience. It should be used weekly as a guide to help you, and your employers keep track of your progress, and also as proof of your qualifications and experience. You will also find this book helpful when you need to provide documentation of your technical training, and on-the-job competencies to college when applying for Articulated College Credit.

PLEASE NOTE: This NTMA-U Record book is your personal record of your learning experience and training - **TAKE CARE OF IT!**

Apprentices are responsible for:

- 1. Getting the record book endorsed by your employer on a weekly basis.**
- 2. Maintaining up-to-date entries in the employer and training sections.**
- 3. Determining with an employer what additional information needs to be written and also how often.**
- 4. Using the "NTMA-U Training Plan" form with your employer to establish a comprehensive apprenticeship program that complies with the DOL- Office of Apprenticeship 607.5 hours of Related Training and 8,000 hours of related trade shop time.**

Please note: Instructors and employers are not responsible for your documentation - they are only responsible for signing off the areas you have completed.

EMPLOYERS

The Apprenticeship Record Book will assist the apprentice in collecting official documentation of their apprenticeship. It is extremely important that you complete the in shop training experience endorsement. This book will be an important tool for your apprentice to record his/her level of machine trades training completed.

PRINTING AND ASSEMBLING AN APPRENTICESHIP RECORD BOOK

Personalizing "Your" Record Book

- This book will be uniquely yours. Your collection of all the information pertaining to your Apprenticeship Training and Practical Work Experience. As no two apprenticeships are identical, no two record books will be identical.
- Creating and maintaining this book will require effort on your part. Your record book will reflect the amount of care and attention you pay to it.
- We recommend you consider purchasing a 1" wide waterproof binder (8.5" x 11") to set up your basic record book. This size will allow you to collect and store any important documents that pertain to your apprenticeship
- Depending on the conditions your record book will be exposed to you may want to consider using a waterproof paper to print out the forms we've created that will become the basis of your record book.



PERSONAL INFORMATION FORM

APPRENTICE INFORMATION

NAME: _____

DATE OF Enrollment into NTMA-U Training:

NAME of Shop Supervisor: _____

EMPLOYER INFORMATION for REGISTERED APPRENTICESHIP AGREEMENTS:

EMPLOYER INFORMATION

Apprentice YEAR: 1 2 3 4 (circle)

Employer: _____

Full Address (Street / City / State / Postal) _____

Employees Start Date with the Company: Dates of Employment: From: _____
(Y/M/D) To: _____

Apprentice YEAR: 1 2 3 4 (circle)

Employer: _____

Full Address (Street / City / State / Postal) _____

Employees Start Date with the Company: Dates of Employment: From: _____
(Y/M/D) To: _____

Apprentice YEAR: 1 2 3 4 (circle)

Employer: _____

Full Address (Street / City / State / Postal) _____

Employees Start Date with the Company: Dates of Employment: From: _____
(Y/M/D) To: _____

EMPLOYER INFORMATION

Apprentice YEAR: 1 2 3 4 (circle)

Employer: _____

Full Address (Street / City / State / Postal) _____

Employees Start Date with the Company: Dates of Employment: To: _____

From:

TRAINING

Week	Topic	Coursework	Assignments	
1	Introductions and Getting Started	Blueprint: chapter 1, TP100 Video: Cool Stuff Being Made		Discussion Board:
				Introductions – 25pts
				Discussion Board:
2	Measurements, Materials, and Safety	Video: Chinese Manufacturing Safety Blueprint: TP101	ToolingU: Machine Guarding 140 Flammable/Combustible Liquids 155 Metalworking Fluid Safety 165	Discussion Board:
				Comment on safety video – 25 pts
3	Safety	Blueprint: Chapter 2	ToolingU: Safety for Mechanical Work 105 Safety for Metal Cutting 115	TEST: Safety and Blueprint – 200pts
4	Measurement Systems and Machine Tool Overview	Math: Adding/Subtracting Fractions. Converting Fractions into decimals and percent's. Changing decimals into fractions. Introduction to Angles. Blueprint: pages 30-31	ToolingU: Math Fundamentals 100 Math: Fractions and Decimals 105 Math Units of Measurement 115	Quiz:
				Measurements – 100pts
				Discussion Board: Precision Measuring Tool – 25 pts
5	Semi-Precision Measurement	Precision Measuring Tools (videos) Math: Pgs. 23-24 (review videos) Blueprint: chapter 3 TP102 and TP 103	ToolingU: Overview of Threads 150 Thread Inspection 250	
6	Precision Measurement	How to Read a Micrometer. Using a depth Micrometer. How to read a dial caliper. Milling. Using an Edge finder. Reading and using a dial indicator Math: Page 24 Blueprint: Chapter 4, TP104, TP105	ToolingU: Basic Measurement 110 Mazak Mill: Safety for the mill 260 Mazak Lathe: Safety for the Lathe 265	
7	Precision	Math: Pages 23-26	ToolingU:	MIDTERM –

	Measurement (Cont.)	Blueprint: TP107, TP108	Basics of CMM 120 Inspecting with CMMs 220	200pts
--	------------------------	-------------------------	---	---------------

8	Quality Assurance	ToolingU	ToolingU:	
			Intro to Material 100 Structure of Metals 110 Mechanical Properties of metal 120	
9	Maintenance, Lubrication, and Cutting fluid Overview	Math: Pages 45-50 and 107-116 Video: Metal Cutting Fluids	ToolingU:	
			Physical Properties of Metal 130 Metal Manufacturing 140 Metal Classification 150	
10	Heat Treat of Materials	Math: Pages 40-42 Blueprint: TP109, TP110 Heat Treatment Videos	ToolingU:	
			Heat Treatment of Steel 230 Ferrous Metals and Alloys 210 Nonferrous Metals and Alloys 220	
11	Understanding Drawings	Math: Pages 116-117 Geometry Video Blueprint: TP111, TP112	ToolingU:	
			Geometry: Lines and Angles 155 Geometry Triangles 165 Shop Geometry Overview 170	
12	Layout and Inspection	Math: Units 14-16 (videos)	ToolingU:	TEST -100 pts
			Benchwork and Layout Operation 210 Surface Measurement 140 Basics of the Optical Comparator 130	
13	Hand Tools & Saws and Cutoff Machines	Math: Page 135 (watch videos)	ToolingU:	
			Sawing Fundamentals 155 Band Saw Blade Selection 215	
14	Offhand Grinding (Pedestal) & Drilling, Threading, Tapping, and Reaming	Video: Grinder Safety Math: Pages 136-145	ToolingU:	
			Intro to Abrasives 100 What is Grinding? 110 Grinding Processes 120	
15	Drill Press	Safety Video: Drill Press Math: Pages 146-147	ToolingU:	Discussion Board: Safety video- 25pts
			Intro to Workholding 104 Supporting and Locating 106 Clamping Basics 108	
16	Wrap-up and Testing		FINAL TEST	FINAL – 100pts

TOPIC	POSSIBLE POINTS	STUDENTS POINTS
Discussion Board-Introductions	25	
Discussion Board-	25	
Discussion Board-Safety Video	25	
TEST: Safety and Blueprint	200	
Discussion Board-Precision Measuring Tool	25	
QUIZ-Measurements	100	
Midterm	200	
Test -	100	
Discussion Board- Grinder Safety Video	25	
Final Exam	100	

NTMA-U COURSES	GRADE	Time
Machine Guarding 140		4 hrs
Flammable/Combustible Liquids 155		4 hrs
Metalworking Fluid Safety 165		4 hrs
Mazak Mill: Safety for the Mill 260		4 hrs
Mazak Lathe: Safety for the Lathe 265		4 hrs
Safety for Mechanical Work 105		4 hrs
Safety for Metal Cutting 115		4 hrs
Math Fundamentals 100		4 hrs
Math: Fractions and Decimals 105		4 hrs
Math Units of Measurement 115		4 hrs
Overview of Threads 150		4 hrs
Thread Inspection 250		4 hrs
Basic Measurement 110		4 hrs
Basics of CMM 120		4 hrs
Inspecting with CMMs 220		4 hrs
Intro to Material 100		4 hrs
Structure of Metals 110		4 hrs
Mechanical Properties of Metal 120		4 hrs
Physical Properties of Metal 130		4 hrs
Metal Manufacturing 140		4 hrs
Metal Classification 150		4 hrs
Ferrous Metals and Alloys 210		4 hrs
Nonferrous Metals and Alloys 220		4 hrs
Heat Treatment of Steel 230		4 hrs
Geometry: Lines and Angles 155		4 hrs
Geometry Triangles 165		4 hrs

Shop Geometry Overview 170		4 hrs
Benchwork and Layout Operation 210		4 hrs
Surface Measurement 140		4 hrs

Basics of the Optical Comparator 130		4 hrs
Sawing Fundamentals 155		4 hrs
Band Saw Blade Selection 215		4 hrs
Intro to Abrasives 100		4 hrs
What is Grinding?110		4 hrs
Grinding Processes 120		4 hrs
Intro to Workholding 104		4 hrs
Supporting and Locating 106		4 hrs
Clamping Basics 108		4 hrs
Totals		152 hrs



ON-THE-JOB TRAINING FORM

(TO BE COMPLETED & SIGNED BY EMPLOYER'S REPRESENTATIVE)

DATE		TASKS	ENDORSEMENT
FROM: (Y/M/D)	TO: (Y/M/D)	DESCRIPTION OF TYPES OF WORK PERFORMED	1. NAME 2. TITLE 3. SIGNATURE
			1
			2
			3
			1
			2
			3
			1
			2
			3
			1
			2
			3
			1
			2
			3
			1
			2
			3
			1
			2
			3

			1
			2
			3

TRAINING PLAN WORKSHEET

APPRENTICESHIP TRAINING PLAN YEAR: **1 2 3 4** (circle year of apprenticeship)

Training Period		TRAINING COMPETENCIES	METHOD OF EVALUATION	DATE COMPLETED	ASSIGNED JOURNEYWORKER	ENDORSEMENT
From (Y/M/D)	To (Y/M/D)					
		Demonstrates Safe Work Practices at all Times				
		Takes measurements to an accuracy of .001 using precision measuring tools				
		Demonstrates knowledge and understanding of blueprints				
		Can correctly layout a part				
		Can properly use hand tools				
		Can properly use saws				
		Can properly use pedestal grinders				
		Can properly use a drill press				

Signatures

Date Signed

Employer: _____

Journeyworker / Trainer:

Apprentice: _____