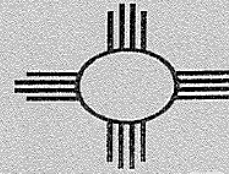


Exceptional service in the national interest



SNL/NM Apprenticeship Program – Tony Bryce
108th IMOG Measurement Technologies Subgroup Meeting
Pantex Plant
October 18th & 19th, 2011



STANDARDS OF APPRENTICESHIP
FOR
SANDIA NATIONAL LABORATORIES

FORMULATED BY REPRESENTATIVES
OF
SANDIA NATIONAL LABORATORIES
AND
THE ATOMIC PROJECTS AND PRODUCTION
WORKERS METAL TRADES COUNCIL AFL-CIO

BUREAU OF APPRENTICESHIP
UNITED STATES DEPARTMENT OF LABOR
AND
THE NEW MEXICO STATE APPRENTICESHIP COUNCIL

DOT CODE 600.280-022
DOT CODE 619.261-010
DOT CODE 710.281-018

REVISION DATE: May 4, 2004



Apprentice Program Update

- Current curriculum needed updating
 - Due to changing technology
 - Implement both on-line and manufacturer training into curriculum
 - Closure of SNL/NM machine shop

On-Line Training

- SME ToolingU
 - ToolingU.com trains manufacturers through a range of carefully integrated online learning tools. Tooling U offers hundreds of online training classes written for metal manufacturers, welders, assemblers, and maintenance professionals. These classes are delivered through our custom learning management system (LMS), which provides extensive tracking and reporting capabilities.





Manufacturer Training

- Include manufacturer training in curriculum
 - Zeiss Calypso
 - OGP MeasureMind 3D, Measure Fit, Smart Profile
 - Others possible(Mahr, Taylor Hobson)



Curriculum (Current and Proposed)

Mechanical Measurements - Current Training Matrix				Mechanical Measurements - Proposed Matrix		
		START DATE AS APPRENTICES				START DATE AS APPRENTICES
		YEARS IN APPRENTICESHIP				YEARS IN APPRENTICESHIP
Program Year	Course Number	Course Name	Required Hrs	Program Year	Course Number	Course Name
	CORE & CONCENTRATION TRAINING				CORE TRAINING	
1 - CORE	COM100	CYBER SECURITY AWARENESS TRAINING (Former Annual Computer Security Briefing)	1.00	1	CHM100	Chemical Safety Training
1 - CORE	LMC190	HARASSMENT-FREE WORKPLACE(REPLACED ANNUAL EEO AND AA EMPLOYEE BRIEFING - EEO100)	1.00	1	CHM103	Site Specific chemical safety training
1 - CORE	ESH100	ANNUAL ES&H AWARENESS	1.00	1	GDT 101	GEOMETRIC DIMENSIONING & TOLERANCING
1 - CORE	MCH100	GENERAL SHOP SAFETY	20.00	1	FDM101	FUNDAMENTALS OF DIMENSIONAL METROLOGY I
1 - CORE	AMTTP-MT240	GEOMETRIC DIMENSIONING & TOLERANCING	32.00	1	CMM101	Intro to COORDINATE MEASURING MACHINE (CMM)
1 - CORE	ME-002	FUNDAMENTALS OF DIMENSIONAL METROLOGY	32.00	1	VMM101	Video Measuring Machine Operation & Training
1 - CORE	ME-006	COORDINATE MEASURING MACHING (CMM) OPERATION AND TRAINING	40.00	1	AMTTP-MM110	INTRODUCTION TO CAD
1 - CORE	ME-001	INTRODUCTION TO DIMENSIONAL METROLOGY	18.00	1	CHM1410	Intro to Chem (or higher)
		MECHANICAL MEASUREMENTS CORE YEAR 1 TOTAL	145.00	1	CHM1492	Intro to Chem Lab (or higher)
		MECHANICAL MEASUREMENTS CONCENTRATION		1	TU200110	Metal Removal Processes 110
1			0.00	1	TU600100	Intro to EDM 100 (EDM = Electric Discharge Machining)
1			0.00	1	TU350110	Basic Measurement 110
		MECHANICAL MEASUREMENTS CONCENTRATION TOTAL	0.00	1	TU350115	Linear Instrument Characteristics 115
TOTAL HOURS YEAR 1			145.00	1	TU350120	Basics of the CMM 120 (CMM = Coordinate Measuring Machine)
				1	TU350130	Basics of the Optical Comparator 130
2	COM100	ANNUAL COMPUTER SECURITY	1.00	1	TU350140	Surface Measurement 140
2	ESH100	ANNUAL ES&H AWARENESS was 1 hr	1.00	1	TU350150	Overview of Threads 150
2	SEC100	ANNUAL SECURITY REFRESHER was 1 hr	1.00	1	TU800130	Blueprint Reading 130
2	MATH121	COLLEGE ALGEBRA	48.00	1	TU351200	Intro to GD&T 200 (Geometric Dimensioning & Tolerancing)

Questions?