Elizabeth Herrera

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CNC Machinist

EDUCATION & TRAINING

Associate of Applied Science Degree - Advanced Manufacturing Technologies
Community College of Denver – Denver, CO.
January 2018- December 2019 Magna cum laude
Relevant Coursework: Safety, Lean manufacturing, Blueprint reading, Manual lathe and mill operations, CNC Lathe and Mill Operation and programming. stick welding.
CAD/CAM - MasterCam, Solidworks, Fusion 360, Tinkercad, Flexi and V-carve, Cura, Photon workshop
Advanced knowledge of GD&T
Advanced knowledge of material properties and machining characteristics
Able to select appropriate cutting tools for programmed operations
Knowledge of proper speeds and feeds for cutting tools and materials being cut
Able to set up CNC equipment using best shop practices
Able to operate manual machine shop equipment
Able to work independently with minimal supervision
Advanced knowledge of machine shop inspection tools and inspection techniques utilizing calipers, micrometers, optical comparator, gage pins/blocks, sine bar, thread gages and Zeiss CMM using Calypso.
3D printing

***Machines used*:**
Samsung CNC Mill with Fanuc controller
Samsung CNC Lathe with Fanuc controller
Agie Charmilles Wire EDM w/ George Fisher controller
5 axis Mikron with Heidenhain controller
Ziess CMM w/Calypso
Electrical Discharge Machine (EDM) hole popper
Manual Mills and lathes

3D Printers, type and composites/materials used:
Lulzbot Taz - FDM – PLA, ABS
Lulzbot Mini - FDM – PLA, ABS
Tevo Tornado - FDM (my personal machine) - Carbon fiber, wood filled, TPG, Copper (90% by Virtual Foundry), Borosilicate (pyrex by Virtual Foundry), PLA, ABS
Anycubic - SLA (my personal machine) – resins, wax
Stratasys 900F - FDM
Stratasys 450MC - FDM
Stratasys 400MC – FDM

Post Graduate Certificates earned:
Wire EDM Technician
Heidenhain Conversational programming - controller for Mikron 5 Axis Mill

WORK EXPERIENCE

Lockheed Martin - Littleton, Co.
Numeric Control Operator - January 2020 – Present
Duties include but are not limited to: Run multiple CNC machines, mills, lathes, EDM. often simultaneously. Inspection of parts per engineering drawing, using Advanced knowledge of GD&T and inspection techniques, operate manual machine shop equipment. Cad/cam - Mastercam. work independently with minimal supervision
***Machine Shop Equipment*:**
PDC Machine Shop
DMG Mori CMX 1100V w/4th axis - run/set-up
DMG Mori Multi Axis Lathe NLX 1500|500 w/ Celos controller - run/set-up
HURCO VMX42 - run/set-up
AGIE Progress 4 Wire EDM - run/set-up
Mitsubishi MV1200R Wire EDM - run/set-up
Tumbler, band saw, shear and surface grinder
Additive Lab (AML)
Stratasys 900F – FDM 3D Printer
Stratasys 450MC – FDM 3D Printer
Stratasys 400MC – FDM 3D Printer
Certifications earned:
2 Ton Overhead crane certification
Lean 6S Green Belt – in progress

Community College of Denver - Denver, CO.
Machine Shop Work Study April 2018 – June 2019
Responsible for set up and clean up, cut parts with horizontal band saw and EDM drill, run small parts on the CNC mill and Wire EDM, maintain coolant levels on Samsung CNC lathe and mills, start and run machinery including 5 Axis mill, Lulzbot Taz and Lulzbot Mini 3d printers

Advantage Sign Company - Englewood, CO.
Sign Fabricator January 1999 – June 2017
Create files with CAD/CAM programs Flexi & Corel, cut and lay vinyl/graphics, wired *LEDs*, switches and power supplies, Responsible for purchasing necessary supplies. aluminum, plexiglass, vinyl, trimcap, LED's, power supplies, switches, jumpers etc. Prioritizing work. Sometimes built wood shipping crates. Installer. Driver

Machine/tools used:

5’x10’ CNC Router, 48” & 30“Plotter, 54” large format HP digital printer, 54” laminator, riveter, TIG welding, spot welder, band saw, table saw, router, panel saw, hole popper, 10’ press brake, 12’ sheer

Certifications earned:

Forklift

Volunteer / Community Work:

e-NABLE – nonprofit that provides 3D printed prosthetic hands for children - Ongoing

3d printing face shields for medical personnel during COVID pandemic – Lockheed Martin

Judge for various University of Colorado Denver Racas competitions – Student presentations

WIN Denver Outreach

Favorite hobbies: 3D printing, electro-plating 3d prints, jewelry making, metal casting, creating with epoxy resins

Machines owned:

Shark - CNC Router
Tevo Tornado - FDM 3D Printer (I print metals and Pyrex with this one)
Anycubic Photon Max - Resin 3D printer
Tabletop Kiln – wax burnouts, firing ceramics, sintering pyrex and metal 3d prints
Electric Melting Furnace
Rolling Mill - Rolls metal into sheet or wire
Tumbler,
Mapp gas and Oxygen torch soldering station for hard/high temp soldering. 1100-1275 degrees F
4 ½” grinder,
bench grinder, drills, router, reciprocating saw and many other various power and hand tools
Welding skills are not the best but are acceptable

Metals owned and/or used: Aluminum, Titanium, A-286, Stainless and other Steels, Silver, Copper, Gold, Gallium, Indium, Zinc, Cadmium, Cobalt, Tin and Palladium