APP101 QUALITY TECHNICIAN RELATED TECHNICAL INSTRUCTION (RTI) IS 300 HOURS IS DONE IN CONJUNCTION WITH 4000 HOURS OF ON-THE-JOB TRAINING (OJT). THIS IS A CUSTOMIZED, NON-CREDIT PROGRAM RESULTING IN A USDOL CERTIFICATE.

RELATED TECHNICAL INSTRUCTION OUTLINE Quality Technician Apprenticeship ONET/SOC CODE 17-3026.00. RAPIDS CODE 0462 RTI 300 HOURS	
Employability / Soft Skills	Concepts of Dependability, Presentability, Reasonableness, Respectability, Suitability, Transitioning, Work-ready, Written, and verbal communication skills, and Adaptability with special attention to communicating, listening, and presenting information. The topics for Employability skills will be addressed in focused classes and reinforced in subsequent classes.
QC/Machine Tool Math	This course develops basic mathematical competencies as applied to machine tool technology.
Quality analytics and problem solving	Quality analysis using QI Macros software
Continuous Improvement	Flow chart, Check sheet, Fishbone, 5Why, FMEA, 6 sigma introduction
Manufacturing Processes overview	Introduces industrial manufacturing processes that employ material shaping, joining, machining and assembly. Topics include: casting, shaping and molding or other processes (i.e., Laboratory, Refrigeration, Machining, Welding, Mechanics, Electrical, etc.)
Computer Literacy *	Intro to Word Course; Intro to PowerPoint Course; Basic or Advanced Excel Course - each utilizing the standard TCSG Course and incorporating actual Quality document requirements. Overview of Software collaboration process tools like Microsoft Teams, Zoom, etc. Functions, effects, usage, issues.
Measurement concentration	Introduces practical problem-solving techniques including analytical problem solving, troubleshooting, reading blueprints, diagrams, schematics and symbols, specifications and tolerances. The course emphasizes how the machine or mechanical system works, reading engineering specifications and applying a systematic approach to solving the problem. Use of Calipers, Micrometers. A CMM will be utilized learning to write a basic 3D measurement program.
Quality Control Techniques	Survey and application of techniques used throughout industry. Frequency distribution, Histogram, Ppk-Cpk, Data Collection, SPC
Measurement analysis	Measurement, Gage RR, Gage, and measurement improvement
Lean Principles**	Survey and application of Waste Elimination, 5S, Kaizen, Continuous Improvement, and Capability improvement
Industrial Safety	OSHA 10 level class with complimentary JSA and study of Near miss concepts. Accident investigation and reporting
Capstone Project	Student will choose quality project within company to include raw data and conclude in a management team presentation. The Quality Capstone project will be proposed by the apprentice, agreed, and confirmed by the company, and guided by the college instructor and company mentor. Periodic review will be held by the company and the instructor with each apprentice to ensure progress, timing, content is satisfactory.

Quality Technician Apprenticeship OLJ Skills / Competency Mix

A. Safety and Health skills Demonstrate good safety practices Demonstrate proper techniques for lifting and carrying Maintain work area properly Safely operate hand tools Wear required safety equipment / PPE Identify types of fire extinguishers and their proper uses Demonstrate safe practices when using powers tools Demonstrate safe use of solvents Read and interpret SDS and GHS sheets HazCom trained Understands and complies with OSHA guidelines and requirements Administer first aid and CPR Understands the principles and use of Lock-out/tag-out Hazard recognition skills including Near Miss understanding Subtotal	120
B. Basic / General Skills Use good time management skills Understands Company Products and Processes as a basis for applying all Quality principles Thoroughly understands and Follows GMP / Work Instructions Principles and Practice of dimension and tolerancing (GDT) Use and care of the precision measuring instruments such as micrometers, height and depth gauges, calipers or other as used by the company Read and interpret drawings, BOMs, Product specifications, Quality / Inspection plans Mathematics for Quality Control Activity Use various power tools Subtotal	780
C. Process Skills Tests and inspects products at various stages of production Compiles and evaluates statistical data Knowledge of Quality system required computer skills (QMS, Excel, Metlab, Minitab. Etc.) Interprets technical information. Drawings, formulas, data tables, standards, specifications Selects products for tests at specified stages in production process, AQL, SPC Measures products and processes according to required specs / definitions Records test data, applying statistical quality control procedures. Prepares graphs or charts of data or enter data into computer for analysis Understands Process Capability theory (Cpk, Variability sources) Understands SPC and how used in production Problem Solving skills - Root cause concepts Auditing Skills Subtotal	1480

D. Measurement Skills Set up and perform destructive and nondestructive tests on materials, parts, or products to measure performance, life, or material characteristic Set up inspection equipment for and measurement of complex attributes (coordinate and concentricity, datums, angularity etc.) Set up and operation of complex measuring equipment (i.e. CMM, gas chromatograph, FFT) Calibration of gauges and instruments Performs Capability studies Performs process measurements Subtotal	940
E. Professional / Leadership / Advanced Competencies Quality mindset. Realizes and applies critical quality-oriented thinking to situations involving parts, processes, suppliers, Customers, coworkers so as to maximize the chance to protect and improve Customer quality. Project planning and scheduling Recommends and participates in defining and writing documents such as Work instructions, GMP's, Quality plans etc. Evaluates data and writes reports to validate or indicate deviations from existing standards. CMM Programming introduction Understands and supports PPAP, NPPDI, or other industry Quality planning process Prepares and effectively presents technical information Professionalism. Presents self, communicates, behaves as a Quality professional. Subtotal	680
Target for a 2-year program	4000