



Tooele Applied Technology College

88 S Tooele Blvd, Tooele, Utah 84074

435-248-1800

Certificate Syllabus		Industrial Maintenance Technician
Certificate 1 Year (Catalog Year: 2017)		
TATC Core (960 hours required)		Hours
<i>Industrial Maintenance Technician (960 hours required)</i>		<i>Hours</i>
<i>Basic Computer Skills for Professionals (BTEC0102A)</i>		30.00
<i>Operating System (1)</i>		8.00
<i>Microsoft Word (2)</i>		8.00
<i>Working in Documents (3)</i>		8.00
<i>Excel (4)</i>		6.00
<i>Safety & Shop Rules (INDP1602)</i>		15.00
<i>PPE & Lockout/Tagout (1)</i>		10.00
<i>Tool Safety (2)</i>		5.00
<i>Industrial Safety (INDP1603)</i>		20.00
<i>OSHA & Fire Safety (1)</i>		5.00
<i>Bloodborne Pathogens & SDS Hazard Communication (2)</i>		5.00
<i>Industrial Hazards (3)</i>		10.00
<i>Math Skills for Industrial Maintenance (INDP1604)</i>		45.00
<i>Introduction to Shop Math (1)</i>		10.00
<i>Shop Math 2 (2)</i>		10.00
<i>Shop Math 3 (3)</i>		10.00
<i>Shop Math 4 (4)</i>		15.00
<i>Quality Approaches to Maintenance (INDP1605)</i>		20.00
<i>Intro to Quality (1)</i>		10.00
<i>Quality 2 (2)</i>		10.00
<i>Rigging Equipment and Safe Lifting (INDP1606)</i>		20.00
<i>Introduction to Rigging (1)</i>		10.00
<i>Rigging 2 (2)</i>		10.00
<i>Industrial Metals and Plastics (INDP1607)</i>		10.00
<i>Fundamentals of Materials (1)</i>		10.00
<i>Oxyfuel and Plasma Cutting (INDP1608)</i>		20.00
<i>Oxyfuel Welding and Cutting (1)</i>		15.00
<i>Plasma Cutting (2)</i>		5.00
<i>Essentials of Welding (INDP1609)</i>		35.00
<i>Introduction to Welding (1)</i>		20.00
<i>Welder Power Sources and Weld Codes (2)</i>		15.00
<i>Stick Welding (SMAW) for Maintenance (INDP1610)</i>		20.00

<i>SMAW (1)</i>	20.00
<i>Wire Welding (GMAW/FCAW) for Maintenance (INDP1611)</i>	20.00
<i>GMAW & FCAW (1)</i>	20.00
<i>TIG Welding (GTAW) for Maintenance (INDP1612)</i>	20.00
<i>GTAW (1)</i>	20.00
<i>Basic Flux Core Soldering (INDP1613)</i>	15.00
<i>Introduction to Soldering (1)</i>	5.00
<i>Soldering Equipment and Applications (2)</i>	5.00
<i>Soldering and Flux Selection (3)</i>	5.00
<i>Mechanical Systems and Applications (INDP1614)</i>	35.00
<i>Mechanical Systems (1)</i>	5.00
<i>Introduction to Mechanical Systems (2)</i>	15.00
<i>Mechanical Power Variables (3)</i>	5.00
<i>Gear Geometry & Applications (4)</i>	10.00
<i>Piping, Valves, and Pumps (INDP1615)</i>	40.00
<i>Piping Lab (1)</i>	15.00
<i>Valve Lab (2)</i>	10.00
<i>Pump Lab (3)</i>	15.00
<i>Rolling Element Bearing Maintenance (INDP1616)</i>	20.00
<i>Bearings (1)</i>	20.00
<i>Springs, Clutch and Brake Applications (INDP1617)</i>	10.00
<i>Spring Applications (1)</i>	5.00
<i>Clutch and Brake Applications (2)</i>	5.00
<i>Quality in Maintenance (INDP1618)</i>	45.00
<i>Mechanic Quality (1)</i>	10.00
<i>Vibration Analysis Lab (2)</i>	10.00
<i>Belt Drive Applications (3)</i>	5.00
<i>Shaft Alignment Lab (4)</i>	20.00
<i>Adhesives and their Applications (INDP1619)</i>	10.00
<i>Adhesives (1)</i>	10.00
<i>Threaded Mechanical Fasteners (INDP1620)</i>	40.00
<i>Introduction to Fasteners (1)</i>	10.00
<i>Fasteners 2 (2)</i>	10.00
<i>Fasteners 3 (3)</i>	10.00
<i>Fasteners 4 (4)</i>	10.00
<i>Introduction to Metal Cutting and Machining (INDP1621)</i>	35.00
<i>Fluid Safety (1)</i>	5.00
<i>Intro to Metal Cutting (2)</i>	15.00
<i>Metal Cutting 2 (3)</i>	15.00
<i>Inserts & Cutting Tools for Machining (INDP1622)</i>	30.00
<i>Cutting Tools & Fluids (1)</i>	15.00
<i>Insert Selections (2)</i>	15.00
<i>Basic Operation of the Engine Lathe (INDP1623)</i>	55.00
<i>Engine Lathe (1)</i>	15.00

<i>Lathe Operation (2)</i>	20.00
<i>Threading on the Engine Lathe (3)</i>	20.00
Basic Operation of the Manual Knee Mill (INDP1624)	65.00
<i>Mill & Drill Geometry (1)</i>	10.00
<i>Manual Mill (2)</i>	15.00
<i>Benchwork and Layout (3)</i>	10.00
<i>Manual Mill Operations (4)</i>	20.00
<i>Holemaking on the Mill (5)</i>	10.00
Introduction to Hydraulics and Pneumatics (INDP1625)	45.00
<i>Introduction to Hydraulics and Pneumatics (1)</i>	15.00
<i>Hydraulics and Pneumatics 2 (2)</i>	15.00
<i>Hydraulics and Pneumatics 3 (3)</i>	15.00
Hydraulics and Pneumatics Power Sources & Control Valves (INDP1626)	30.00
<i>Power Sources & Print Reading (1)</i>	15.00
<i>Control Valves & Actuators (2)</i>	15.00
Hydraulic Circuit & System Design (INDP1627)	30.00
<i>Circuit Design (1)</i>	15.00
<i>Hydraulic Troubleshooting (2)</i>	15.00
Introduction to Electrical Systems (INDP1628)	30.00
<i>Fundamentals of Electrical Systems (1)</i>	15.00
<i>Circuit Calculations & Components (2)</i>	15.00
Power Sources and Electrical Instruments (INDP1629)	30.00
<i>Electrical Instruments & Print Reading (1)</i>	15.00
<i>Electrical Power Sources (2)</i>	15.00
Motor Controls and Their Applications (INDP1630)	40.00
<i>Introduction to Motor Controls (1)</i>	15.00
<i>Motor Controls 2 (2)</i>	15.00
<i>Motor Controls 3 (3)</i>	10.00
Basic Concepts of PLCs (INDP1631)	30.00
<i>Introduction to PLCs (1)</i>	15.00
<i>PLCs 2 (2)</i>	15.00
Insights to Management Quality (INDP1632)	10.00
<i>Management Quality (1)</i>	10.00
Industrial Leadership (INDP1633)	40.00
<i>Introduction to Leadership (1)</i>	10.00
<i>Leadership 2 (2)</i>	10.00
<i>Leadership 3 (3)</i>	10.00
<i>Leadership 4 (4)</i>	10.00
TATC Recommended Course (0 hours required)	Hours
Industrial Maintenance Technician (0 hours required)	Hours
Keyboarding Basics (BTEC1000)	30.00
<i>Lesson 1-6 (1)</i>	10.00
<i>Lesson 7-12 (2)</i>	10.00
<i>Lesson 13-18 & final assessment (3)</i>	10.00

TATC Recomm. Supplemental (0 hours required)		Hours
<i>Industrial Maintenance Technician (0 hours required)</i>		<i>Hours</i>
<i>Introduction to Siemens PLCs (INDP1650)</i>		20.00
<i> Introduction to Siemens PLCs (1)</i>		10.00
<i> Programming Concepts (2)</i>		10.00
TATC Elective (0 hours required)		Hours
<i>Industrial Maintenance Technician (0 hours required)</i>		<i>Hours</i>
<i>Basic CNC Mill Operation (INDP1655)</i>		30.00
<i> Introduction to CNC Mill (1)</i>		5.00
<i> Mill Components and Tool Holders (2)</i>		10.00
<i> Manual Mode (3)</i>		15.00
<i>Core CNC Information (INDP1660)</i>		35.00
<i> Axis (1)</i>		5.00
<i> Codes (2)</i>		10.00
<i> Mill Offsets (3)</i>		10.00
<i> Memory and Storage (4)</i>		10.00
<i>Advanced Mill Operation (INDP1665)</i>		35.00
<i> Mill Offset Adjustments (1)</i>		10.00
<i> Introduction to Running Parts (2)</i>		10.00
<i> Mill Manufacturing (3)</i>		15.00