WORK PROCESS SCHEDULE
WIND TURBINE TECHNICIAN
O*NET-SOC CODE: 49.9099.02 RAPIDS CODE: 2000

DESCRIPTION: Perform general maintenance, operations and inspections on wind turbines and related facilities. General and site specific safety awareness, utilize personal protective equipment, conduct electrical troubleshooting, repair and replacement, follow specific lock out/tag out procedures, mechanical/power trains maintenance, hydraulic troubleshooting and demonstrate climbing proficiency. Conduct visual blade inspection and physical blade repair, bolt torque testing and installation and testing of hardware and software and follow specific driving safety guidelines.

Min/Max Hours

First Aid and Training: **200-300**
Basic knowledge of treatment practices for a variety of medical emergencies and emergency rescue.

Safety Training: **335-500**

A. Advanced knowledge of fall protection
B. Chemical hazards, confined spaces, arc flash
C. Electrical safety
D. Emergency response, lockout / tag out
E. Crane safety and signals
F. Risk assessment
G. Defensive driving training
H. OSHA regulations and standards that pertain to the construction and maintenance of wind turbines and the energy industry.

Equipment and Practices: **400-600**

A. General knowledge of safety regulations and personal protective equipment
B. Being familiar with proper procedures for care, cleaning, and safe use of hand, electric, hydraulic, pneumatic and mechanical tools
C. Learning to have an operating knowledge of service manuals, bulletins, and parts books
D. Instruction on the use of hand tools, measuring tools, timing devices, pressure indicators, vacuum indicators, tachometer, internal/external, depth and protrusion gages, run out indicators, and torque measuring devices incorporated with wind turbine repair

Electrical: **1000-1500**

A. AC electrical theory
B. DC electrical theory, power generation, lightning protection, transformers, semiconductors, sensors
C. Power transmission, regulators, series-parallel switches, circuits, circuit protection, electronic controls, wiring, electrically controlled valves, switches, relays, resistors, solenoids, lighting systems, accessory systems, monitor systems, trouble shooting, schematic and print reading
D. Use of all applicable test instruments and applied electrical calculations.

Hydraulics: **400-600**

A. Fluid power hydraulic theory, reservoirs, pumps,
B. Filtration systems, motors, accumulators, hoses, tubing, oil coolers, servo valves, relief valves, tubing
C. Hydrostatic drives, check valves, hold values, control valve and cylinders
D. Basic knowledge in schematics and system troubleshooting.

Mechanical: **1140-1700**

A. Fasteners, housings, oil analysis, hydrostatic drives planetaries, bearings, shafts, gearbox alignment
B. Inspection, failure analysis, lubrication, torque procedures, vibration analysis, yaw systems and pitch systems.

Brakes: **130-200**

A. Pads, linings, cylinders, diaphragms, lines
B. Calipers, hydraulic valves, linkage, reservoirs, controls, pressure switches, valves and chambers.

Blade Inspections and Maintenance: **130-200**

A. Proper inspection, airfoils, rotors, composite repair
B. Blade construction, assembly, and repair techniques as well as performance, operation and maintenance characteristics.

Computers: **265-400**

A. Basic knowledge of the CPU, monitor, printer, parallel and serial port, USB, Windows
B. Data acquisition and assessment
C. Programmable logic control systems, fiber optics, and a basic understanding of Supervisory Control and Data Acquisition systems.

Total Hours **4000-6000**

RELATED INSTRUCTION OUTLINE
WIND TURBINE TECHNICIAN
O*NET-SOC CODE: 49.9099.02 RAPIDS CODE: 2000

First Year	**Total Hours: 348**
Safety	80
Electrical	100
Mechanical/Power trains	80
Hydraulics	60
Wind dynamics	20
Blade Inspection	8
Second Year	**Total Hours: 144**
Safety	20
Electrical	22
Mechanical/Power trains	32
Hydraulics	42
Wind dynamics	20
Blade Inspection	8
Third Year	**Total Hours: 144**
Safety	20
Electrical	22
Mechanical/Power trains	32
Hydraulics	42
Wind dynamics	20
Blade Inspection	8