

# Work Process Schedule

WORK PROCESS SCHEDULE		O*NET-SOC Code: 17-3029.09
Additive Manufacturing Technician		RAPIDS Code: 2097CB
<b>Job Title:</b> Additive Manufacturing Technician		
<b>Level:</b>	<b>Specialization:</b>	
<b>Stackable Program:</b> __Yes __No		
<b>Base Occupation Name:</b>		
<b>Company Contact:</b>		
<b>Address:</b>	<b>Phone:</b>	<b>Email:</b>
<b>Apprenticeship Type:</b> <input checked="" type="checkbox"/> Competency-based <input type="checkbox"/> Time-based <input type="checkbox"/> Hybrid	<b>Prerequisites:</b>	

Job Function 1: Protects self and other workers from accidents and injuries			
Competencies	Core or Optional	RTI	OJT
A. Adheres to personal grooming requirements in the facility	Core		
B. Uses personal protective equipment	Core		
C. Follows fire safety procedures	Core		
D. Works around energy sources and performs lock-out/tag-out procedures	Core		
E. Handles and stores hazardous materials as assigned	Core		
F. Demonstrates both emergency and standard shutdown of all required equipment	Core		
G. Uses and locates eyewash sinks and first-aid kits	Core		
H. Demonstrates, reports, and responds promptly, safely, and appropriately to emergency or hazard situations and troubleshoots any issues that may arise	Core		
I. Handles dense material	Core		

J. Adheres to National Electric Code (NEC) safety procedures for tightening, disconnecting, or connecting electrical conductors and components	Core		
K. Adheres to hazard avoidance procedures when in contact with live electrical systems	Core		
L. Resets circuit breakers	Core		

<b>Job Function 2: Demonstrates workplace skills and plans and controls work processes</b>			
<b>Competencies</b>	<b>Core or Optional</b>	<b>RTI</b>	<b>OJT</b>
A. Procures and evaluates information	Core		
B. Conducts discussions with line managers and colleagues and within the team in a situation-appropriate manner; presents facts and circumstances	Core		
C. Communicates in a timely manner using available modes of communication	Core		
D. Uses opportunities to resolve conflicts	Core		
E. Selects proper software	Core		
F. Handles technical computer systems and, in particular, deploys software and connects and uses peripheral devices	Core		
G. Prepares protocols and reports using standard software	Core		
H. Demonstrates proficiency in mathematical processes	Core		
I. Schedules time to run machine	Core		

<b>Job Function 3: Selects the proper materials, tools, and equipment for the job</b>			
<b>Competencies</b>	<b>Core or Optional</b>	<b>RTI</b>	<b>OJT</b>
A. Chooses and applies a type of material to render parts	Core		
B. Compares the differing properties and characteristics of common materials used for additive manufacturing models	Core		
C. Ensures proper parts are in stock and orders parts, supplies, or equipment from catalogs or suppliers	Core		
D. Plans and lays out repair work	Core		
E. Demonstrates fluency in using technology to assess and troubleshoot issues	Core		
F. Initiates a formal bid process for materials	Core		
G. Evaluates supplier capabilities against a standard set of well-documented criteria	Core		
H. Demonstrates proper storage of additive materials (i.e., powders)	Core		

<b>Job Function 4: Prepares for installation</b>			
<b>Competencies</b>	<b>Core or Optional</b>	<b>RTI</b>	<b>OJT</b>
A. Builds or assembles additive manufacturing equipment devices or systems	Core		
B. Engages, as part of the engineer team, in the design, configuration, or application of additive manufacturing equipment systems	Core		
C. Fabricates housings, fittings, or fixtures, using metalworking machines	Core		
D. Develops three-dimensional simulations and models of automation systems	Core		
E. Evaluates the efficiency and reliability of industrial additive manufacturing equipment systems	Core		

<b>Job Function 5: Installs and assembles machine</b>			
<b>Competencies</b>	<b>Core or Optional</b>	<b>RTI</b>	<b>OJT</b>
A. Sets up and commissions a 3-D printer and supporting equipment	Core		
B. Installs, programs, or repairs programmable controllers, robot controllers, end-of-arm tools, or conveyors	Core		
C. Documents additive manufacturing equipment test procedures and results	Core		
D. Aligns, fits, or assembles component parts	Core		
E. Terminates wires between controllers	Core		
F. Assembles, installs, or repairs key components	Core		
G. Sets up and operates machine tools to repair or fabricate machine parts, fixtures, or tools	Core		
H. Aligns and calibrates new equipment after installation	Core		
I. Tests performance of additive manufacturing equipment assemblies	Core		

<b>Job Function 6: Operates the machine</b>			
<b>Competencies</b>	<b>Core or Optional</b>	<b>RTI</b>	<b>OJT</b>
A. Starts up and shuts down an operation in accordance with standard operating procedures	Core		
B. Fabricates a verification part or assembly using additive manufacturing equipment	Core		
C. Conducts quality assurance post-print	Core		

<b>Job Function 7: Uses proper methods with electrical systems</b>			
<b>Competencies</b>	<b>Core or Optional</b>	<b>RTI</b>	<b>OJT</b>
A. Uses a multi-meter properly	Core		
B. Calculates power in an electrical circuit given current and voltage	Core		
C. Installs fuses and circuit breakers in circuits	Core		
D. Inspects circuit breakers to determine if they have been tripped	Core		
E. Recognizes all protective tags and lockout devices used to isolate equipment and components from hazardous energy sources	Core		

<b>Job Function 8: Problem solves, diagnoses, and troubleshoots effectively</b>			
<b>Competencies</b>	<b>Core or Optional</b>	<b>RTI</b>	<b>OJT</b>
A. Inspects, operates, or tests machinery or equipment to diagnose machine malfunctions	Core		
B. Dismantles machines, equipment, or devices	Core		
C. Diagnoses mechanical problems and determines the most efficient way to correct them	Core		
D. Uses proper standards and techniques to troubleshoot	Core		
E. Troubleshoots additive manufacturing equipment systems	Core		
F. Repairs machines, equipment, or systems	Core		

<b>Job Function 9: Engages in career management and employee relations</b>			
<b>Competencies</b>	<b>Core or Optional</b>	<b>RTI</b>	<b>OJT</b>
A. Develops and explains a short-term career plan and resume	Optional		
B. Demonstrates appropriate interpersonal skills in job performance evaluations, group communication and decision-making, and conflict resolution	Optional		
C. Identifies and explains the major departments or functions in a company and how they affect production units	Optional		
D. Understands additive business or “use” case	Optional		