



**STANDARDS OF APPRENTICESHIP
ADOPTED BY**

**Regional Additive Manufacturing Partnership Maryland (RAMP-MD)
Public Private Partnership Manufacturing Apprentice and Education Program (P3MAP)**

2021 Pulaski Highway Suite D, Havre de Grace, Maryland 21078

**IN COOPERATION AND REGISTERED WITH THE
MARYLAND APPRENTICESHIP AND TRAINING COUNCIL**

**DEPARTMENT OF LABOR, LICENSING AND REGULATION
1100 NORTH EUTAW STREET
BALTIMORE, MARYLAND 21201**

AND

**U.S. DEPARTMENT OF LABOR
EMPLOYMENT AND TRAINING ADMINISTRATION
OFFICE OF APPRENTICESHIP**

FOR THE OCCUPATION(S) OF:

**Industrial Manufacturing Technician 7-3029
(O*NET-SOC CODE)**

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FOREWORD

Apprenticeship training consists of systematic instruction and experience in all the practical aspects of work in a skilled vocation offered to persons entering or who are currently in the work place.

The communications, space, government, maintenance, building, manufacturing, service, transportation, and utility industries are unique in that their work requires mechanical, technical and professional knowledge and skills. Industry must select individuals who have a natural aptitude for the trade or occupation and who can and will progress in the work place.

By the nature of the work in these industries, a high degree of personal responsibility is expected from the individual journeyworker. Although supervision is provided on many jobs, the worker still finds himself or herself called upon constantly to make decisions regarding the best and safest methods to produce given results.

Businesses have become highly complex and faulty work could prove extremely hazardous and expensive. The modern journeyworker takes pride not only in the technical correctness and soundness of work but also in its appearance.

The Maryland Apprenticeship and Training Council has dedicated its efforts to developing an efficient program of apprenticeship so that the apprentices of today, through a proven systematic program of schooling and on-the-job training, may become the qualified, all-around journeyworkers of tomorrow. Success depends in large measure upon the willingness and cooperation of Sponsors in this important activity.

DEFINITIONS

“Apprentice” means a worker 16 years old or older, who has entered into a voluntary written agreement with a sponsor who has agreed to teach the worker a skilled occupation under terms defined in Regulations .04 and .05 of Subtitle 12, Chapter 43 of the Code of Maryland Regulations.

“Apprenticeship agreement” means a written agreement between an apprentice and the sponsor that defines the relationship and is registered with the Maryland Apprenticeship and Training Council.

“Apprenticeship Program” means a written plan containing, at a minimum, the standards set forth in Regulation .05 of Subtitle 12, Chapter 43 of the Code of Maryland Regulations.

“Cancellation” means the deregistration by the Council of an apprenticeship program at the written request of the program sponsor, formal deregistration proceedings when the action is involuntary or the termination of an individual Apprenticeship Agreement at the request of the apprentice or sponsor.

“Council” means the Maryland Apprenticeship and Training Council.

“Employer” means an individual or organization located or operating in Maryland that employs an apprentice on a work site and who has entered into a voluntary written agreement with the apprenticeship program sponsor to accept and to abide by the sponsor’s apprenticeship standards.

“Journeyworker” means an individual who has completed a registered apprenticeship in a skilled occupation or the equivalent of an apprenticeship in length and content of work experience and all other requirements in the apprenticeship standards for a skilled occupation.

“Nonjoint Apprenticeship Sponsor” means an apprenticeship program sponsor in which a *bona fide* collective bargaining agent does not participate. It includes an **“individual nonjoint sponsor”** which is an apprenticeship program sponsored by one employer without participation of a union or a **“group nonjoint sponsor”** which is an apprenticeship program sponsored by two or more employers without the participation of a union.

“On-the-job learning” means that segment of apprenticeship which can be obtained only on the job site.

“Probationary period” means the period of time in an apprenticeship contract in which a party to the apprenticeship agreement may cancel the contract without cause.

“Registration Agency” means the Maryland Apprenticeship and Training Council.

“Registration of an apprenticeship program” means the acceptance and recording of the program and issuance of a certificate of registration by the Council as meeting the basic standards and requirements of the Council.

“Related instruction” means an organized and systematic form of instruction designed to provide knowledge of the theoretical and technical subjects related to the skilled occupation.

“Secretary” means the Secretary of Labor, Licensing and Regulation or a person specifically designated by the Secretary.

“Sponsor” means an individual, association, committee, organization or employer in whose name or title the apprenticeship program is or is to be registered.

SECTION 1 – STANDARDS OF APPRENTICESHIP

RAMP-MD/P3MAP herein after referred to as the **“Sponsor”** hereby adopts and subscribes to the Standards contained within this document and such appendices as may be made a part of this agreement, which shall govern the administration and operation of the Sponsor’s apprenticeship program.

SECTION 2 – DUTIES OF THE APPRENTICESHIP COMMITTEE

The duties of the Apprenticeship Committee include, but are not limited to:

- A. Elect a chairperson, a secretary and other officers as it deems advisable and fix their duties and terms of office.
- B. Adopt rules and regulations for the conduct of the Committee’s affairs.
- C. Hold regular meetings and record the minutes of each meeting.
- D. Supervise the administration and enforcement of the Standards.
- E. Recruit and select applicants for the apprenticeship program. The Committee shall recruit and select applicants in accordance with the apprenticeship program’s approved selection procedures and Affirmative Action Plan.
- F. Maintain records for five (5) years of all persons applying for the apprenticeship program indicating whether or not the applicant: a.) completed the application process, b.) met the apprenticeship program qualifications, c.) was placed on the eligibility list, and was d.) registered.
- G. Evaluate prior experience and training of qualified applicants to determine advanced credit to be granted.
- H. Provide each Participating Employer with the program’s Apprenticeship Standards.
- I. Enter into an agreement with each Participating Employer, stating that the Participating Employer agrees to adhere to the program’s registered Standards and Affirmative Action Plan.
- J. Submit a copy of the executed Employer Acceptance Agreement and Supplemental Form for each Participating Employer to the Council.
- K. Refer applicants who have been selected for the apprenticeship program only to employers who have signed an agreement with the Committee.
- L. Enter into an Apprenticeship Agreement clearly stating hours, wage scale, work processes and responsibilities of the Committee and the apprentice with each apprentice.
- M. Review each Apprenticeship Agreement and submit the original along with three (3) signed copies, *typed or in ink*, to the Council.
- N. Maintain a registered Apprenticeship Agreement for each apprentice and provide each apprentice with a registered Apprenticeship Agreement.
- O. Ensure that all apprentices are provided continuous employment insofar as possible.
- P. Advise apprentices that if laid-off, they should report to the Committee for re-assignment.

- Q. Monitor attendance at related instruction, and classroom performance of apprentices and instructors.
- R. Ensure that all apprentices receive all-around diversified training in all job processes of the skilled occupation.
- S. Establish and maintain a record system for each apprentice's work experience (hours worked, wages paid) and attendance and performance in related instruction.
- T. Investigate the training provided apprentices and take appropriate action if deficiencies are found.
- U. Determine when apprentices have satisfactorily completed their on-the-job training and related instruction.
- V. Submit evidence of satisfactory completion of each apprentice to the Council and recommend issuance of a State Certificate of Completion of Apprenticeship.
- W. Administer appropriate discipline to any apprentice who fails to fulfill his/her obligation on the job or in related instruction.
- X. Review Apprenticeship Standards periodically and adopt changes subject to the approval of the Council.
- Y. Designate an individual to carry out the day to day activities of the Committee and to periodically report to the Committee on his/her activities. Such individual shall be designated as the Apprenticeship Director, Apprentice Coordinator, Apprentice Supervisor, etc.

SECTION 3 – SUPERVISION OF APPRENTICES

The Committee shall designate a supervisor of apprentices who shall have full day to day direction and control of all apprentices, and who shall further:

- A. Be responsible for assignment of apprentices under the immediate supervision of qualified journeyworkers for instruction.
- B. Be responsible for keeping and maintenance of progress records on apprentices to include related instruction and ensuring that each apprentice is advanced and rotated through the basic work processes and skills of the occupation as stated in the appendices attached hereto.
- C. Perform or otherwise cause the routine and periodic evaluation of the progress of each apprentice.
- D. Provide for a safe work environment.

SECTION 4 – PARTICIPATING EMPLOYERS

Each employer participating in the Sponsor's group non-joint apprenticeship program has the responsibility to employ and train apprentices in accordance with the rules, regulations and decision of the Apprenticeship Committee as established and operated under the sponsor's Apprenticeship Standards and in conformity with the Maryland State Plan for Equal Employment Opportunity in Apprenticeship and Training. Each employer shall execute an Employer Acceptance Agreement and Supplemental Form with the Apprenticeship Committee of such forms provided by the Apprenticeship Committee. The Apprenticeship Committee shall submit a copy of the executed Employer Acceptance Agreement and Supplemental Form to the Council.

SECTION 5 – DUTIES OF THE PARTICIPATING EMPLOYER

- A. Notify the Apprenticeship Committee of its desire for apprentice.
- B. Accept apprentices who have been referred by the Committee for employment.
- C. Provide all-around training for each apprentice in all job processes of the skilled occupation.
- D. Maintain records of hours, rate of pay and type of on-the-job training for each apprentice.
- E. Provide the Committee with monthly reports of hours, pay and on-the-job training for each apprentice.
- F. Submit information to the Committee as to journeyworkers and apprentice composition and the average journeyworkers wage rate to the Committee yearly or as requested by the Committee.
- G. Refer apprentices who are laid-off, dismissed from the job, or those with disciplinary problems to the Committee for appropriate action.

SECTION 6 – QUALIFICATIONS FOR APPRENTICESHIP

The Sponsor hereby assures that applicants for the apprenticeship program will meet the required minimum qualifications provided below and as may be further enumerated within this document and as may be set forth in appendices hereto:

- Age: 18 YEARS OR OLDER
- Education: HIGH SCHOOL DIPLOMA/GED EQUIVALENT, STA apprentices must complete 11th grade
- Residence: N/A
- Physical Condition: ABLE TO PERFORM ALL REQUIRED JOB DUTIES
- Transportation: RELIABLE
- Other: N/A

SECTION 7 – RECRUITMENT, SELECTION, EMPLOYMENT, AND TRAINING OF APPRENTICES

The recruitment, selection, employment and training of apprentices during their apprenticeship shall be without discrimination because of political or religious opinion or affiliation, marital status, race, color, national origin, sex, or age, unless sex or age constitutes a *bona fide* occupational qualification, or the physical or mental disability of a qualified individual with a disability. The Sponsor will take affirmative action to provide equal opportunity in apprenticeship and will conduct and operate the apprenticeship program as required under Title 29 of the Code of Federal Regulations, Part 30, as amended, and the Maryland State Plan for Equal Employment Opportunity in Apprenticeship and Training.

The Sponsor will, prior to the selection and concurrent employment of five (5) or more apprentices, submit to the Maryland Apprenticeship and Training Council an Affirmative Action Plan for formal approval in accordance with .05 and .06 of the Maryland State Plan for Equal Employment Opportunity in Apprenticeship and Training.

SECTION 8 – TERM OF APPRENTICESHIP

The term of apprenticeship for each skilled occupation shall be stated in the respective appendices to these Standards.

- A. The probationary period shall be 25% of the full term of the apprenticeship.
 1. During the probationary period the Apprenticeship Agreement terminated without cause by either party to the agreement upon written notice to the Registration Agency.
 2. Following the probationary period, the Apprenticeship Agreement may be suspended, canceled or terminated for good cause with due notice to the apprentice providing reasonable opportunity for corrective action and with written notice jointly to the apprentice and the Registration Agency of the final action taken.
 3. Upon a showing of satisfactory evidence, advanced standing or credit may be granted for up to 50 percent of the on-the-job training *or* the related instruction *or both* for previously acquired experience, training, skills, or aptitude, with commensurate wages for any progression step. In order for a specific apprentice to obtain credit for more than 50 percent of these requirements, the Sponsor shall:
 - a. Send a written request to the Council detailing why the credit should be granted;
 - b. Obtain the explicit written approval of the Council to grant credit to the apprentice.
 - c. Actual hours of credit for each major work experience will be stated on the appendix to the Apprenticeship Agreement.

SECTION 9 – HOURS OF WORK FOR APPRENTICES

The hours of work for apprentices shall be the same as for journeyworkers in the occupation and apprentices shall be subject to the same call for overtime. However, to the maximum extent practicable, overtime shall not interfere with apprentices' attendance in related instruction.

SECTION 10 – SCHEDULE OF MAJOR WORK PROCESSES

Apprentices shall be provided training and work experience in the occupation in which indentured under these Standards and in accordance with the schedule of major work experiences as outlined in the respective appendix to the occupation.

SECTION 11 – APPRENTICE WAGES

A progressively increasing schedule of wages to be paid apprentices on satisfactory progress shall be included in the appendices for each occupation. The apprentice wage rate shall be expressed in percentages of the journeyworker hourly wage rate. The journeyworker hourly rate for each occupation included in this program shall be the *average journeyworker hourly rate* and shall be stated in dollars and cents.

- A. Nothing in this program shall be construed nor interpreted as preventing the employer from granting reasonable advancement in wages ahead of schedule to apprentices who have demonstrated unusual progress.
- B. The employer should ascertain if any of its activities are covered by the Fair Labor Standards Act. Employees in covered activities, including apprentices, must be paid time and one half for all hours worked over 40 hours per week.
- C. Modification of journeyworker wages or the apprentice wage progression shall be promptly submitted to the Council for its approval.

SECTION 12 – RATIO OF APPRENTICES TO JOURNEYWORKER

No more apprentices will be employed than can be properly trained and afforded reasonable opportunity for future employment in the occupation. To ensure proper training, the number of apprentices shall not exceed one (1) apprentice to each journeyworker regularly employed in the occupation.

Further, a Sponsor may not have registered more apprentices than permitted in the Sponsor's approved and registered Standards of Apprenticeship. Apprentices deployed on the Sponsor's premises and at each individual job site away from the Sponsor's premises shall be deployed in accordance with the Sponsor's approved ratio of apprentices to journeyworkers provided that the first apprentice may be deployed at a job site immediately after the first journeyworker at a job site.

SECTION 13 – APPRENTICESHIP AGREEMENT

Immediately upon employing an apprentice, the Sponsor shall prepare a ***minimum of one (1) original and three (3) copies*** of an individual Apprenticeship Agreement using forms approved by the Council and also submit an apprenticeship agreement through the Registered Apprenticeship Partners Information Data System, using the Apprentice Electronic Registration process by the sponsor and the apprentice and approved by and registered with the Registration Agency.

- A. Each Apprenticeship Agreement shall be signed ***in ink*** by an authorized representative of the Sponsor and by the apprentice (and if a minor, by the apprentice's parent or guardian) and forwarded to the Council for registration.
- B. The Council shall retain the original and shall return all other registered copies to the Sponsor. The Sponsor shall retain one (1) copy, provide one (1) copy to the apprentice and provide one (1) copy to the apprentice's Participating Employer.

No person shall be considered a *bona fide* apprentice until they are registered with the Council. Registered apprentices shall constitute the only class of workers employed to learn the occupations covered under these Standards.

SECTION 14 – RESPONSIBILITIES OF APPRENTICES

The Apprenticeship Committee shall impress upon an indentured apprentice that, in signing the Apprenticeship Agreement, they have voluntarily agreed to abide by the provisions of these Standards. The Committee shall inform the apprentice about the responsibilities and obligations under this apprenticeship program including those to the Sponsor and to the Participating Employer:

- A. To perform diligently and faithfully in the work of the skilled occupation in which they are registered in accordance with the provisions of the Sponsor's registered Standards of Apprenticeship.
- B. To respect the property of the Sponsor and their Participating Employer and to abide by the rules and regulations of the Sponsor and the employer.
- C. To attend regularly and complete satisfactorily the required hours of instruction in subjects related to the occupation as provided within these Standards, or as may be modified in the future.
- D. To submit such records of work experience and training received on the job as may be required by the Apprenticeship Committee.
- E. To develop work habits and procedures to assure a safe work environment.
- F. To work for the Participating Employer to which assigned until completion of apprenticeship, unless reassigned to another Participating Employer by the Apprenticeship Committee or until the Apprenticeship Agreement is terminated.
- G. To perform at all times in a credible ethical and moral manner, realizing that much time, money, and effort will be spent in affording this opportunity to learn a skilled occupation.

SECTION 15 – CANCELLATION OR TERMINATION OF APPRENTICESHIP AGREEMENTS

The Sponsor shall *immediately and in all instances* notify the Council, *in writing*, stating reasons for cancellation of an Apprenticeship Agreement.

SECTION 16 – ADJUSTING DIFFERENCES

Either the Sponsor or the apprentice may consult with the representative of the Maryland Apprenticeship and Training Council should differences of opinion arise in the interpretation of any provision of these Standards.

SECTION 17 – CERTIFICATE OF COMPLETION OF APPRENTICESHIP

In order to be eligible to be awarded a Certificate of Completion of Apprenticeship, *an apprentice must successfully complete both* the required *related instruction* and *on-the-job training* while in the employ of and under the supervision of a registered apprenticeship program Sponsor.

Upon completion of the term of apprenticeship, the Sponsor shall advise the Council, *in writing*, attesting to the satisfactory completion of the apprenticeship in accordance with the Standards and the date upon which it was completed, and request that a Certificate of Completion of Apprenticeship be issued by the Council for award to the apprentice.

Whenever Federal, State or local licensure or certification is *required* to work or practice in an occupation, the Sponsor shall provide the Council *written* evidence that the apprentice has attained license or certification *prior* to the completion of apprenticeship.

SECTION 18 – LAY-OFF OF APPRENTICES

When necessary to lay-off apprentices, such lay-off shall be in accordance with seniority, provided any apprentice laid-off shall be given the opportunity of reinstatement in seniority order before any new apprentice may be employed.

Where warranted, efforts will be made by the Sponsor to transfer obligation to another Sponsor and provide credit to the apprentice for satisfactory time and training earned.

SECTION 19 – RELATED INSTRUCTION

Successful completion of a *minimum of 144 hours per year* of classroom instruction in the theoretical and technical subjects related to the occupation *or* the number of hours necessary to cover related courses recommended by the Sponsor and approved by the Council, is required for each apprentice.

- A. Where classes in public schools are not available, other organized trade, industrial or correspondence courses of equivalent value may be substituted.
- B. Attendance at related instruction shall not be considered as hours worked when given outside of regular working hours.

SECTION 20 – MODIFICATION

Standards will be registered with the Maryland Apprenticeship and Training Council and may be modified by the Sponsor upon approval by the Council. ***Modifications shall not alter Apprenticeship Agreements in effect without the consent of all parties concerned.*** The Council will be given the name and address of the appropriate authority designated by the Sponsor to receive, process and effect disposition of complaints.

SECTION 21 – ACCIDENT PREVENTION AND SAFETY

Safety and Health Training: The Sponsor shall instruct apprentices in safe and healthful work practices and shall ensure that apprentices are trained in facilities and other environments that are in compliance with either the occupational safety and health standards promulgated by the Secretary of Labor under Public Law 91-596 dated December 29, 1970 or State standards that have been found to be at least as effective as the Federal standards. Such instruction shall be coordinated with the actual work performed on the job and to include appropriate tools and equipment.

SECTION 22 – LAWS AND REGULATIONS

Provisions of this program shall not be construed nor interpreted as permitting the violation of any State or Federal law or regulation.

The Sponsor agrees and commits to the full recording and maintenance of all records concerning apprentices as required by the Maryland Apprenticeship and Training Council and other applicable laws.

SECTION 23 – INACTIVE PROGRAM STATUS

If a registered apprenticeship program Sponsor has no registered apprentice involved in an on-the-job training or related instruction activity for a 1-year period, the Council shall place the program in inactive status and notify the Sponsor of the inactive status.

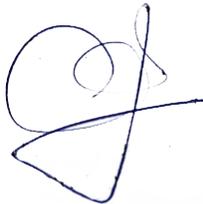
- A. A Sponsor may reactivate an inactive program within a 1-year period after placement in inactive status by registering a new apprentice.
- B. *After* 1 year in inactive status, the program may be reactivated by the Council only after a review of the Standards, work processes, and related instruction to ensure that they are current with industry practices.

SECTION 24 - REGISTRATION AGENCY

The Maryland Apprenticeship and Training Council, Department of Labor, Licensing, and Regulation, is recognized by the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship as the appropriate Registration Agency, for Federal purposes, for apprenticeship programs in the State of Maryland.

SECTION 25 – RIGHT TO VISIT

Any Council member, the Director of Apprenticeship and Training, or designee shall have the right to visit any job site where apprentices are employed and apprentice related instruction classes are in session in order to determine compliance with Apprenticeship Standards.



Signature of Sponsor

4/19/19

Date

Dave Wheatley_____

Typed or Printed Name

Chairman of the Board, RAMP MD

Title

Program registered incorporating the basic Standards established by the Maryland Apprenticeship and Training Council

By _____, Secretary
Maryland Apprenticeship and Training Council

Date

Typed or Printed Name

APPENDIX A

WORK PROCESS SCHEDULE INDUSTRIAL MANUFACTURING TECHNICIAN (EXISTING TITLE: INDUSTRIAL MANUFACTURING TECHNICIAN) O*NET-SOC CODE: 17-3029.09

This schedule is attached to and a part of these Standards for the above identified occupation. Entry level Industrial Manufacturing Technicians operate industrial production related equipment, work with manufacturing related tools, and perform work processes related to a wide variety of manufacturing settings. Apprentices will learn to set up, operate, monitor, and control production equipment. They will also help improve manufacturing processes and schedules to meet customer requirements.

1. TYPE OF OCCUPATION

Time Based

2. TERM OF APPRENTICESHIP

The term of apprenticeship shall be time based, which has been established to be 4,000 hours. Hours of labor shall be the same as established for other skilled employees in the occupation.

3. RATIO OF APPRENTICES TO JOURNEYWORKERS

Consistent with proper supervision, training, safety, and continuity of employment throughout the apprenticeship, the ratio of apprentices to journeyworkers is established as 1 (one) to 1 (one)

COMPETENCY

HOURS

Protect self and other workers from accidents and injuries

100

- Follow industry-specific safety procedures around electricity, machines, equipment & manufacturing processes
- Minimize potential hazards
- Work following OSHA industrial safety standards
- Maintain clean work areas and follow Six Sigma practices
- Demonstrate awareness of first aid, CPR, and blood borne pathogens
- Inspect, maintain, and report and replace hand tools and power equipment

Operate production equipment

1500

- Works according to production schedules to meet job specifications
- Operates equipment safely and efficiently
- Monitor and inspect products and processes
- Monitor and adjust equipment during operations as needed
- Documents work, work processes and adjustments
- Shuts down equipment properly
- Disassembles equipment and components, if appropriate
- Cleans up tooling, equipment, and work spaces
- Sanitizes equipment according to applicable standards

Produce quality product**600**

- Verifies product quality following quality work instructions
- Report completed work accurately
- Perform quality checks
- Demonstrate awareness of defects and causes of rework
- Monitors the cost of poor quality (including scrap and rework)
- Apply cost of quality principles to jobs and manufacturing processes
- Apply quality training to job duties and work processes
- Document all quality tests & understand implications and consequences of documentation
- Adhere to customer specific quality requirements
- Follow company specific quality guidelines

Interpret technical information**300**

- Use blueprints, formulas and process control sheets efficiently
- Reference project plans and documents by completing an apprenticeship Job Book or checklist of competency completion
- Apply job specifications to work processes accurately
- Interprets production orders properly
- Follows quality specifications accurately

Measure and inspect work using mechanical tools and testing equipment**200**

- Measure and visually inspect materials, products or parts, and finished goods accurately in accordance with job specifications
- Apply math to measuring and inspection of work
- Interpret tolerances using blue prints and job specifications
- Use gauges and measuring devices accurately
- Verify workmanship and compliance with job specifications
- Identify and report non-compliant stock, material, parts, or finished goods
- Inspects materials, parts, products, or finished goods in accordance with quality
- Select and use hand and mechanical tools appropriately
- Use applicable systems to report results and document work

Demonstrate knowledge of routine equipment maintenance**200**

- Inspect equipment
- Demonstrate mechanical problem-solving abilities
- Identify when a machine is not working properly
- Apply preventative maintenance practices effectively
- Follow general lubrication guidelines
- Maintain machine components following manufacturer specifications (if applicable)
- Follow basic troubleshooting guides
- Assist and communicate with maintenance personnel on equipment malfunctions
- Demonstrate awareness of basic maintenance concepts

Demonstrate knowledge of inventory and material processes **100**

- Apply lean manufacturing principles to work processes
- Compare inventory flow to roles and responsibilities
- Demonstrate aware of process flows in a manufacturing plant
- Identify material management processes
- Demonstrate awareness of logistics related to raw materials and customer deliveries
- Work with production materials according to work schedules
- Apply basic manufacturing equipment operations

Demonstrate knowledge of trends and the current state of the business **100**

- Identify the competition and potential opportunities (Ex. Strengths, Weaknesses, Opportunities and Threats or related analysis)
- Explain the competition and potential opportunities between internal Businesses
- Describe the importance of department and plant goals (Ex. Key Performance Indicators)
- Apply basic business terms to manufacturing related work processes
- Demonstrate awareness of both upstream and downstream
- Participate in company leadership briefings
- Relate the job role and trade to keeping jobs

Demonstrate continuous improvement **100**

- Suggests improvements to business and manufacturing processes
- Uses tools for continuous improvement effectively
- Minimizes and removes process wastes (associated with water, energy, manufacturing processes, and other resources)
- Participates in continuous improvement for professional growth
- Identifies potential defects
- Follows standard work instructions properly
- Maintains records regarding machine faults
- Applies visual management/visual controls through six sigma
- Applies root cause analysis to continuous improvement of manufacturing work processes
- Applies autonomous maintenance principles
- Practices quick change overs (ex. Six-minute exchange of die)
- Identifies equipment abnormalities
- Adapts to process changes including cycle times, set-ups, and tooling
- Participates in cross-training opportunities
- Understands the business strategies and motives for continuous improvement
- Applies profitable sustainability concepts to continuous improvement

Set-up production equipment **300**

- Plans for and identifies set-up requirements
- Selects tools and materials
- Verifies safety
- Assembles equipment

- Performs mechanical set-up according to employer's standard operating procedure manual, and equipment manufacturer's specifications
- Tests and verifies set-up
- Adjusts set-up as needed to meet product and production specifications
- Interprets visual controls accurately
- Inspects equipment and components

Local Options

500

The employer will establish additional training otherwise stated in this Work Process Schedule (WPS), to be demonstrated by the apprentice and performed for some or all of the required minimum hours for Local Options, and/or the employer may distribute some or all of the required minimum hours to one or more work processes stated in this WPS.

TOTAL HOURS: 4000

RELATED INSTRUCTION SPECIFIC INFORMATION

Related instruction hours to be given per year: 144 hours minimum

Provider: Community College of Baltimore County, Cecil College, Harford Community College and P3MAP

Location: P3MAP Aberdeen Proving Ground, Building E4301, Aberdeen Proving Ground, MD 21010

Days of the week classes will be held: Monday thru Friday

Time: Primary training session 8:00-12:00 AM Friday with schedule adjusted to the content of specific instruction session

**RELATED INSTRUCTION OUTLINE
INDUSTRIAL MANUFACTURING PRODUCTION TECHNICIAN
(EXISTING TITLE: INDUSTRIAL MANUFACTURING TECHNICIAN)
O*NET-SOC CODE: 17-3029.09**

Related instruction - teaches apprentices the science and theory behind their daily duties. The related instruction comprises **296 hours** of the apprenticeship program.

	Academic Hours
Industrial Manufacturing 1	72
Industrial Math for the Occupation.....	72
Industrial Manufacturing 2	72
Communication for Apprentices.....	72
BAS Transition to Trainer (optional).....	8
 TOTAL HOURS.....	 296

COURSE DESCRIPTIONS:

Industrial Manufacturing 1 72 hours

The first semester includes an orientation to the occupation and manufacturing, and then followed by the Manufacturing Skills Standards Council (MSSC) safety module, MSSC quality module, OSHA 10 certification, blueprint reading, visual inspection, measurement, and first aid & CPR training. Manufacturing concepts will be introduced and applied in a variety of industrial settings.

Industrial Math for the Occupation 72 hours

This course provides applied mathematics instruction from a review of basic arithmetic; basic algebra; applications, based on geometry; right triangle trigonometry, oblique angle trigonometry and compound angles. U.S. and metric measurement systems will be introduced.

Industrial Manufacturing 2 72 hours

The second semester includes the MSSC manufacturing processes and production and maintenance awareness modules, along with communication, lean manufacturing, problem solving, and frontline leadership. Manufacturing related concepts will be applied to a variety of industrial settings. The course concludes with an examination of emerging trends and technologies, and future directions for manufacturing.

Communication for Apprentices 72 hours

Introduces the apprentice to basic communication concepts relating to the workplace. It is designed specifically for the apprentice to acquire the necessary skills of giving instructions, writing a technical memo, and explaining a technical process. Throughout the course the apprentice will brainstorm, write, edit, revise, and use one-on-one communication delivery in a small group. The course combines lecture and hands-on activities utilizing information, which the apprentice brings from the workplace.

BAS Transition to Trainer 8 hours **(optional)**

This 8-hour course teaches soon-to-be journeyworkers how to serve as a mentor and job coach, how to provide hands-on skill training, and how to give positive and effective performance feedback. Course is offered at multiple times each year.

APPRENTICESHIP PROGRAM SPONSOR

RAMP–MD/P3MAP
2021 Pulaski Highway Suite D
Havre de Grace, Maryland 21078

APPRENTICE WAGE PROGRESSION SCHEDULE

Name of Occupation: **Industrial Manufacturing Technician**

Journeyworker Hourly Rate: **\$23.12**

Type of Program: **Time Based**

The progressive wage schedule in this occupation will be as follows: (please indicate percentages of journeyworkers rate in hours, steps, levels, grades or months for each period.

1st period: 1000 hours 60%

2nd period: 1000 hours 70%

3rd period: 1000 hours 80%

4th period: 1000 hours 90%

**AFFIRMATIVE ACTION PLAN
UNDER MARYLAND RULES AND REGULATIONS – TITLE 09.12.42
EQUAL EMPLOYMENT OPPORTUNITY IN APPRENTICESHIP AND TRAINING
BY AUTHORITY OF THE LABOR AND EMPLOYMENT ARTICLE,
SECTION 11-405 OF THE ANNOTATED CODE OF MARYLAND**

SPONSOR RAMP-MD/P3MAP

ADDRESS 2021 Pulaski Highway Suite D, Havre de Grace, Maryland 21078

Hereby adopts the following Equal Employment Opportunity pledge

EEO PLEDGE

The recruitment, selection, employment and training of apprentices during their apprenticeship shall be without discrimination based upon political or religious opinion or affiliation, marital status, race, color, creed, national origin, sex or age, unless sex or age constitutes a bona fide occupational qualification, or the physical or mental disability of a qualified individual with a disability. The sponsor will take affirmative action to provide equal opportunity in apprenticeship and will operate the apprenticeship program as required under Maryland Regulation 09.12.42 and 29 CFR 30.

In order to fulfill this pledge, the sponsor will engage in the following affirmative actions to assure as far as possible maintenance of minority and female participation equal to that of the minority and female composition in the work force area.

- A. When sponsor accepts applications only at specific intervals, such information shall be disseminated at least 30 days in advance of the earliest date of application at each interval. When sponsor receives applications year around, such information shall be regularly disseminated but not less than semi-annually. Such information shall be given to the Department, local schools, employment services offices, women’s centers, outreach programs and community organizations which can effectively reach minorities and women and shall be published in newspapers which are circulated in the minority community and among women as well as in the general areas in which the sponsor operates. Such information shall include qualification requirement(s), opening and closing dates during which applications will be issued and/or received, and specific address(s) where applications will be issued and/or received. Such informational notices will contain the statement that the sponsor is an equal opportunity employer.

- B. Sponsor will participate in annual workshops conducted by employment service agencies for the purpose of familiarizing school, employment service and other appropriate personnel with the apprenticeship system and current opportunities therein.

- C. Sponsor will cooperate with local school boards and vocational education systems to develop programs preparing students to meet the standards and criteria to qualify for entry into apprenticeship programs.
- D. Internal communication of sponsor's equal opportunity policy in such a manner as to foster understanding, acceptance, and support among the sponsor's various officers, supervisors, employees and members; and to encourage such persons to take necessary action to aid sponsor in meeting its obligations under this part.
- E. Sponsor will engage in such programs as outreach for the positive recruitment and preparation of potential applicants for apprenticeship.
- F. To encourage the establishment and utilization of pre-apprenticeship, preparatory trade training, or others designed to afford related work experience or to prepare candidates for apprenticeship, sponsor will assure that those who complete such programs are afforded full and equal opportunity for admission into the apprenticeship program.
- G. Sponsor will utilize journeyworkers to assist in implementation of this affirmative action program.
- H. Sponsor will grant advanced standing or credit on the basis of previously acquired experience, training, skills or aptitude for all applicants equally.
- I. Other appropriate action to ensure that the recruitment, selection, employment and training of apprentices during the apprenticeship shall be without discrimination because of political or religious opinion or affiliation, marital status, race, color, creed, national origin, sex or age, unless sex or age constitutes a bona fide occupational qualification, or the physical or mental disability of a qualified individual with a disability (e.g. general publication of apprenticeship opportunities and advantages in advertisements, industry reports, etc.; use of present minority and female apprentices and journeyworkers as recruiters; or career counseling).

SELECTION PROCEDURE

Apprentices shall be selected on the basis of objective and specific qualification standards. Examples of such standards are fair aptitude tests, school diplomas or equivalent, occupationally essential health requirements, fair interviews, school grades and previous work experience. Where interviews are used, adequate records shall be kept including a brief summary of each interview and the conclusions on each of the specific factors (e.g. motivation, ambitions and willingness to accept direction which are part of the total judgement).

APPRENTICE SELECTION PROCEDURE

Name of Sponsor RAMP-MD/P3MAP
Address 2021 Pulaski Highway Havre de Grace, Maryland 21078

APPRENTICE SELECTION PROCEDURE MINIMUM QUALIFICATIONS

Age: 18 or older
Education: HSD/GED
Residence: N/A
Physical Condition: Must be physically able to perform all job duties
Transportation: Reliable
Other:

- A. Information regarding apprenticeship openings shall be furnished to the local state employment service and to the local schools.
- B. Applications of responding candidates will be recorded.
- C. Those meeting the basic qualifications such as age, residence, education, and physical condition will be interviewed by the employer or his agent. The interview shall cover such factors as educational record, attitude toward work and apprenticeship, sense of responsibility, previous work experience, whether in the trade or related to the trade, reasons for interest in the trade, hobbies and physical factors.
- D. Qualified applicants who meet the above minimum qualifications will be rated numerically on the basis of the following factors:

GOALS AND TIMETABLES

A good faith effort must be made to bring the total percentages for the utilization of minority apprentices and female apprentices (minority and non-minority) into equivalence with the applicable statistical analysis. A single goal for women in their entering class shall not be less than 50% of the percentage of women in the work force and shall be set for the first year's participation. A separate goal for minorities shall be set in accordance with the applicable statistical analysis.

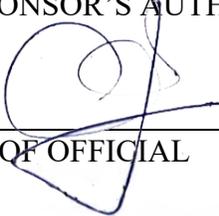
**WORKFORCE ANALYSIS IN APPRENTICESHIP TRAINING
IN ACCORDANCE WITH TITLE 29 CFR - PART 30 REVISED**

MAINTENANCE OF RECORDS

Sponsor shall keep adequate records including a summary of the qualifications of each applicant, the basis for evaluation and for selection or rejection of each applicant, the records pertaining to interviews of applicants, the original application for each applicant, information relative to the operation of the apprenticeship program; including but not limited to job assignment, promotion, demotion, lay-off or termination, rates of pay or other forms of compensation or conditions of work, on-the-job training hours, and hours of related instruction provided; and any other records pertinent to a determination of compliance with these regulations. The records pertaining to individual applicants, selected or rejected, shall be maintained in such a manner to permit identification of minority and female (minority and non-minority) participants.

These records required by this part and any other information relevant to compliance with these regulations shall be maintained five (5) years and made available upon request to the Department or other authorized representative.

David Wheatley
NAME OF SPONSOR'S AUTHORIZED OFFICIAL


SIGNATURE OF OFFICIAL

President of the Board RAMP-MD
TITLE

4-19-19
DATE

**WORKFORCE ANALYSIS
IN
APPRENTICESHIP TRAINING
IN ACCORDANCE WITH TITLE 29 CFR - PART 30 REVISED**

APPENDIX F

SPONSOR RAMP MD P3MAP
ADDRESS 2021 Pulaski Highway Suite D **PHONE NUMBER** 410-638-3059
CITY Harve de Grace **STATE** Maryland **ZIP CODE** 21078

Labor Force Statistics for the State of Maryland

Total Workforce 2,451,125 = (A) 100%
Total Minority Workforce 901,754 = (B) 36.8 % (of A)
Total Female Workforce 1,253,083 = (C) 51.1 % (of A)
Minority INA **Non-Minority** INA

The Sponsor employed the following number of Journeypersons and Apprentices as of: 4/1/19

Total Journeypersons	<u>72</u>	Total Apprentices	<u> </u>	= (D)	<u>100%</u>
Minority	<u>8</u>	Minority	<u> </u>	= (E)	<u> </u> % (of D)
Female	<u>7</u>	Female	<u> </u>	= (F)	<u> </u> % (of D)
Minority Female	<u>0</u>	Minority Female	<u> </u>	non-minority female	<u> </u>

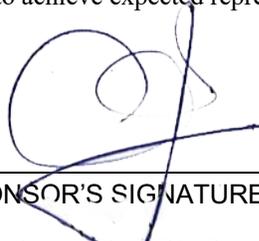
Utilization of minorities and females has been achieved when:

Minorities

(E) % is equal to or exceeds (B) %

OR WHEN

(E) % is less than (B) % underutilization exists and the goal to achieve expected representation is .



SPONSOR'S SIGNATURE

Chairman of the Board, RAMP MD

TITLE

4-19-19

DATE

Females

(F) % is equal to or exceeds (C) %

OR WHEN

(F) % is less than (C) % underutilization exists and the goal to achieve expected representation is 50% of (C). 50% X 25.5 = 25.5 which is the goal for the first year.

APPROVED BY:

REGISTRATION AGENCY

DATE

