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| OFFICE OF APPRENTICESHIP  BULLETIN | **NO.**  2024-120 |
| **DATE**  August 19, 2024 |

**TO:** NATIONAL APPRENTICESHIP SYSTEM STAKEHOLDERS

OFFICE OF APPRENTICESHIP STAFF

STATE APPRENTICESHIP AGENCIES

**FROM:** JOHN V. LADD /s/

Administrator, Office of Apprenticeship

**SUBJECT:** New National Occupational Framework (NOF) Apprenticeable Occupation: Mechanical Engineering Technician

1. **Purpose.** To inform the staff of OA, State Apprenticeship Agencies (SAA), Registered Apprenticeship program sponsors, and other Registered Apprenticeship partners of the following new National Occupational Framework (NOF) to an apprenticeable occupation: Mechanical Engineering Technician
2. **Action Requested.** OA staff should familiarize themselves with this bulletin and the attached Work Process Schedule and Related Instruction Outline, as a source for developing apprenticeship standards and/or providing technical assistance.

Mechanical Engineering Technician will be added to the List of Occupations Recognized as Apprenticeable by OA located on www.apprenticeship.gov. A suggested Work Process Schedule and Related Instruction Outline are attached.

1. **Summary and Background.**
   1. Summary – The occupation Mechanical Engineering Technician was submitted by Mr. Zachary Boren, Senior Policy Program Manager on behalf of Urban Institute, were processed by Joseph L. Olivere and approved by the OA Administrator on August 19th, 2024.

The National Office has approved a new National Occupational Framework (NOF), developed in partnership with the Urban Institute. This NOF has met industry standards and approval; it covers job titles and occupational pathways, related functions and performance criteria, as well as academic, workplace and personal competencies for job success. While use of NOFs in developing standards utilizing the competency-based training approach is voluntary, no additional vetting of a Work Process Schedule (WPS) utilizing the NOF should be required where a program aligns to the occupational framework described in a NOF, beyond the basic requirements set forth in 29 CFR Part 29. While on-the-job learning (OJL) is ordinarily outlined in the WPS, sponsors who utilize a NOF must develop the Related Instruction Outline, which should be included in the standards. Within certain limits, the sponsors of NOF apprenticeship programs are permitted to customize the job functions or competencies contained in a NOF for the Mechanical Engineering Technician occupation.

However, OA encourages the use of all core competencies to be included in the approved WPS.

* 1. Background –

***New/Revised Occupation Background -*** Under 29 CFR section 29.4, an occupation for a RAP must meet the following criteria to be determined apprenticeable:

1. Involve skills that are customarily learned in a practical way through a structured, systematic program of on-the job supervised learning;
2. Be clearly identified and commonly recognized throughout an industry;
3. Involve the progressive attainment of manual, mechanical, or technical skills and knowledge which, in accordance with the industry standard for the occupation, would require the completion of at least 2,000 hours of on-the-job learning to attain; and
4. Require related instruction to supplement the on-the job learning.
5. **New NOF Apprenticeable Occupation.** The occupation Mechanical Engineering Technician was submitted for an apprenticeability determination.

Mechanical Engineering Technician  
O\*NET-SOC CODE: 17-3027.00

RAPIDS Code: 0777

Type of Training: Time-based, Hybrid, Competency-based

Term Length: Time-based 4,000 hours, Hybrid 4,000-6,000, Competency-based 2 years

(Note: This occupation is currently approved at 8000 hours. After consulting with Urban and based on their industry review, the term is updated as follows: TB to 4000 hours, HY to 4000-and Competency-based to 2 years. This may affect current registered programs.)

Mechanical Engineering Technicians bridge a gap between the production floor and the primary engineer team or drafting room. It is anticipated that apprentices will split their time between everyday machine operation and quality control and being a production floor consultant to the engineering team. Although experience in fabrication and assembly are core to becoming proficient in this occupation, these job functions secure a fundamental knowledge base for the individual rather than encapsulating the primary daily work operations of the apprentice. Understanding the fundamental components of basic engineering in collaboration with practical machine operation, fabrication, and assembly creates a more flexible employee who can easily adapt to the needs of any given business.…

Mechanical Engineering Technicians perform the following duties:

* Assists in the design of devices and tools for use in the manufacturing process, including jigs, fixtures, molds, dies, and Computer Aided Design (CAD) blueprints
* Collaborates with engineers in the design of specialized or customized equipment, machines, or structures
* Collaborates with engineers to detail drawings or sketches for production and/or to request parts fabrication by machine, sheet metal or wood shops
* Fabricates mechanical components and products using the necessary tools, instruments, materials, and techniques as needed
* Monitors machinery and performs tests to ensure product quality
* Aids in estimating production and operations information (i.e., costs, capacities) at the request of lead engineers or estimators

1. **Inquiries.** If you have any questions, please contact Joseph L Olivere, Apprenticeship and Training Representative, Division of Standards and Quality at (202) 693-5179.
2. **Attachments.**

