

Statement of Need

Section (a)ii Updated Current and Future Projected National Demand for Employment

The following updates the occupations listed under section 1.a.ii in the State of Need in the GAMAAA proposal. This list includes all the advanced manufacturing occupations in demand listed in the employer letters of commitment included in the original proposal. Again, these are only some of the potential apprenticeship career fields and occupations that require a well-trained workforce in the advanced manufacturing industry that GAMAAA will address. The GAMAAA proposal will also address other occupations not listed below to respond to employer demand for occupations that fall under the H1B advanced manufacturing industry.

CATEGORY	JOB FUNCTION	OCCUPATION (ALL LEVELS)	O-NET
Engineering & Technology	Engineering and Technology	Aerospace Engineers & Technicians	17-2011.00
		Biochemical Engineers & Technicians	17-2199.01
		Chemical Engineers & Technicians	17-2041.00
		Computer Hardware Engineers & Technicians	17-2061.00
		Electrical Engineers & Technicians	17-2071.00
		Electronics Engineers & Technicians	17-2072.00
		Energy Engineers & Technicians	17-2199.03
		Fuel Cell Engineers & Technicians	17-2141.01
		Industrial Engineers & Technicians	17-2112.00
		Industrial Safety and Health Engineers & Technicians	17-2111.01
		Manufacturing Engineers & Technicians	17-2199.04
		Materials Engineers & Technicians	17-2131.00
		Mechanical Engineers & Technicians	17-2141.00
		Mechatronics Engineers & Technicians	17-2199.05
		Nanosystems Engineers & Technicians	17-2199.09
		Product Safety Engineers & Technicians	17-2111.03
		Radio Frequency Identification Device Specialists	17-2072.01
		Robotics Engineers & Technicians	17-2199.08
	Science and Mathematics	Mathematical Science Occupations	15-2099.00
		Mathematical Technicians	15-2091.00
Mathematicians		15-2021.00	
Quality Control Analysts & Technicians		19-4099.01	
Remote Sensing Scientists and Technologists		19-2099.01	
Remote Sensing Technicians		19-4099.03	
Manufacturing and Production	Maintenance, Installation	Bus and Truck Mechanics and Diesel Engine Specialists	49-3031.00
		Electric Motor, Power Tool, and Related Repairers	49-2092.00
		Electrical and Electronics Repairers, Commercial and Industrial Equipment	49-2094.00

		Farm Equipment Mechanics and Service Technicians	49-3041.00
		First-Line Supervisors of Mechanics, Installers, and Repairers	49-1011.00
		Industrial Machinery Mechanics	49-9041.00
		Installation, Maintenance, and Repair Workers	49-9099.00
		Maintenance Workers, Machinery	49-9043.00
		Mobile Heavy Equipment Mechanics, Except Engines	49-3042.00
		Precision Instrument and Equipment Repairers	49-9069.00
	Manufacturing	Aerospace Engineering and Operations Technicians	17-3021.00
		Chemical Technicians	19-4031.00
		Drafters	17-3019.00
		Electrical and Electronic Engineering Technicians	17-3023.00
		Electrical and Electronics Drafters	17-3012.00
		Electrical Drafters	17-3012.02
		Electrical Engineering Technicians	17-3023.03
		Engineering Technologists and Technicians, Except Drafters. All Other	17-3029.00
		Electrical Engineering Technologists	17-3029.02
		Electromechanical Engineering Technologists	17-3029.03
		Electro-Mechanical Technicians	17-3024.00
		Electronic Drafters	17-3012.01
		Electronics Engineering Technicians	17-3023.01
		Electronics Engineering Technologists	17-3029.04
		Engineering Technicians	17-3029.00
		Fuel Cell Technicians	17-3029.10
		Industrial Engineering Technician	17-3026.00
		Industrial Engineering Technologists	17-3029.05
		Manufacturing Engineering Technologists	17-3029.06
		Manufacturing Production Technicians	17-3029.09
		Mechanical Drafters	17-3013.00
		Mechanical Engineering Technicians	17-3027.00
		Mechanical Engineering Technologists	17-3029.07
		Nanotechnology Engineering Technicians	17-3029.12
		Nanotechnology Engineering Technologists	17-3029.11
		Non-Destructive Testing Specialists	17-3029.01
	Robotics Technicians	17-3024.01	
	Production	Adhesive Bonding Machine Operators and Tenders	51-9191.00
		Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	51-2011.00
		Assemblers and Fabricators	51-2099.00
		Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	51-9121.00
		Computer Numerically Controlled Machine Tool Programmers	51-9162.00
		Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	51-4012.00
		Computer Numerically Controlled Tool Operators	51-9161.00
		Computer-Controlled Machine Tool Operators, Metal and Plastic	51-4011.00
		Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	51-9021.00

		Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	51-4032.00
		Electrical and Electronic Equipment Assemblers	51-2022.00
		Electromechanical Equipment Assemblers	51-2023.00
		Engine and Other Machine Assemblers	51-2031.00
		Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	51-4021.00
		Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic & Glass Fibers	51-6091.00
		Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	51-9041.00
		First-Line Supervisors of Production and Operating Workers	51-1011.00
		Forming Operator, Furnace Operator	51-9195.04
		Foundry Mold and Coremakers	51-4071.00
		Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders	51-4033.00
		Helpers--Production Workers	51-9198.00
		Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	51-4034.00
		Layout Workers, Metal and Plastic	51-4192.00
		Machine Feeders and Offbearers	53-7063.00
		Machinists Green Occupation	51-4041.00
		Metal Fabricators, Structural Metal Products	51-2041.01
		Metal Workers and Plastic Workers	51-4199.00
		Metal-Refining Furnace Operators and Tenders	51-4051.00
		Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	51-4035.00
		Model Makers, Metal and Plastic	51-4061.00
		Molders, Shapers, and Casters, Except Metal and Plastic	51-9195.00
		Molding and Casting Workers	51-9195.07
		Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders	51-4072.00
		Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	51-4081.00
		Production Workers, All Other	51-9199.00
		Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	51-4023.00
		Semiconductor Processors	51-9141.00
		Structural Metal Fabricators and Fitters	51-2041.00
		Tool and Die Makers	51-4111.00
		Tool Grinders, Filers, and Sharpeners	51-4194.00
		Welders, Cutters, and Welder Fitters	51-4121.06
		Winery Technician	51-9012.00
IT Support	Quality Assurance	Inspectors, Testers, Sorters, Samplers, and Weighers	51-9061.00
		Welders, Cutters, Solderers, and Brazers	51-4121.00
		Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	51-4122.00
	Information	Business Intelligence Analysts	15-1199.08

		Computer Systems Engineers/Architects	15-1199.02
		Computer User Support Specialists	15-1151.00
		Production, Planning, and Expediting Clerks	43-5061.00
		Weighers, Measurers, Checkers, and Samplers, Recordkeeping	43-5111.00
	Network Systems	Computer Network Architects	15-1143.00
		Computer Network Support Specialists	15-1152.00
		Database Administrators	15-1141.00
		Information Technology Project Managers	15-1199.09
		Software Quality Assurance Engineers and Testers	15-1199.01
	Programming and Software Development	Computer Programmers	15-1131.00
		Computer Systems Analysts	15-1121.00
		Information Security Analysts	15-1122.00
		Network and Computer Systems Administrators	15-1142.00
		Software Developers, Applications	15-1132.00
		Web Developers	15-1133.00