

0896 – Industrial Engineering Series***

This series covers positions managing, supervising, leading, and/or performing professional engineering and scientific work to determine, evaluate, predict, and advise on effective ways for an organization to use its production factors (i.e., people, equipment, materials, information, and energy) to make or process a product or provide a service.

Professional Work in the Engineering and Architecture Group, 0800 November 2008 U.S. Office of Personnel Management **54**

INDUSTRIAL ENGINEERING, 0896		<u>Qualification Standard</u>
Series Definition	This series covers positions managing, supervising, leading, and/or performing professional engineering and scientific work to determine, evaluate, predict, and advise on effective ways for an organization to use its production factors (i.e., people, equipment, materials, information, and energy) to make or process a product or provide a service. This series requires a <u>functional classification code</u> .	
Titling	The basic title for positions in this occupation is <i>Industrial Engineer</i> .	

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<p>Occupational Information</p>	<p>General Occupational Information</p> <p>Industrial engineering work concerns the design, measurement, analysis, evaluation, and control of production and service operations and systems, and their associated management processes. These engineers examine and design the integration of people, information, equipment, automation methods, and materials to achieve optimum quality and productivity in the performance of operating systems. Their activities typically include such areas as production planning and control; quality and management control systems; financial planning and cost analyses; inventory, equipment, warehouse, and materials management; simulations and mathematical modeling; manufacturing systems; and work station design.</p> <p>Industrial engineering work involves the generation and/or application of theories, principles, practical concepts, processes, and systems related to:</p> <ul style="list-style-type: none">• the science of industrial engineering as it applies to:<ul style="list-style-type: none">work measurement and methods engineering and human factors engineering;operations research and statistical methods and processes;manufacturing processes and inventory control; andexperimental design and facility layout;• industrial engineering design and its standards, codes, techniques and practices;• advanced mathematics and economics;• the traditional engineering science disciplines (e.g., mechanical, electrical, materials, civil, and chemical) and the physical science disciplines (e.g., physics, chemistry, materials); and• critical inquiry, analytical reasoning, problem solving, and scientific methodology. <p>Some industrial engineers provide technical advice to management and production officials on organizational patterns, systems, procedures, and planning of work, including:</p>
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	<p>quality and cost controls; organizational effectiveness; and factors leading to operator fatigue or affecting operator safety.</p>
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