

Minimum Qualification Specifications  
for the Classes:

ENGINEERING PROGRAM MANAGER  
ENGINEERING PROGRAM ADMINISTRATOR  
(ENGINEERING PROGRAM ADMR)

Basic Education/Experience Requirement:

All applicants must meet one of the requirements specified in A, B or C below:

- A. Graduation from a school of engineering in an accredited college or university.

Note: For some positions, graduation from an accredited college or university with a degree in physics, mathematics, or chemistry may be accepted as qualifying, provided the applicant has had at least 15 credits in engineering sciences, common to all engineering disciplines; e.g., thermodynamics, statics, electrical science, applied mechanics, engineering drawing, strength of materials, etc.

- B. Administrative, professional or technical experience involving the application and knowledge of the fundamental physical and mathematical sciences underlying professional engineering including physics, chemistry, mathematics through integral calculus, and engineering sciences such as statics, dynamics, strength of material, thermodynamics, fluid mechanics and engineering drawing and other specialized courses to one of the branches of engineering. Such experience must be substantially equivalent to the knowledge and understanding gained by completion of a college training leading to a bachelor's degree in engineering; or
- C. A combination of college training in engineering and experience mentioned in B above substantively equivalent to completion of a college training leading to a bachelor's degree in engineering.

Experience Requirements:

Except for the substitutions provided for in this specification, applicants must have had progressively responsible experience of the kind and quality described below, and in the amounts shown in the following table:

Class Title	Engineering Experience	Supervisory or Staff Advisory Experience	Administrative Experience	Total Exp
Engineering Program Manager	4	2	**	6
Engineering Program Administrator	4	2	1	7

Engineering Experience: Progressively responsible professional engineering which required the knowledge and application of the basic physical and mathematical sciences and the engineering sciences to the solution of theoretical or practical engineering problems.

Examples of qualifying professional engineering experience are as follows:

- A. The development and design of machines, equipment, structures, or power, water, communication, or transportation systems and facilities, or the preparation of development, design, or construction specifications for such materials or systems, involving the use of theoretical and applied mechanics, knowledge of the properties of materials and other appropriate engineering and scientific knowledge and skills.
- B. Original research in one or more branches of engineering, developing engineering applications of physical and other scientific principles.
- C. Administration of engineering programs and projects, involving analysis of requirements for equipment and materials, study of technical feasibility and cost, selection of approach, and direction of problem solution.
- D. Interpretation of systems operational requirements in terms of physical facilities, and the design and development of standard procedures for efficient operational use or maintenance of such facilities.
- E. Evaluation, investigation, or survey of engineering projects, structures, devices, or services.
- F. Such activities as production, construction, regulation, and test, when they involve engineering considerations and decisions as important and controlling elements.

Note: In some situations, experience which is not of itself clearly professional engineering experience may be accepted in lieu of "professional" engineering experience. In such cases, the experience must have been preceded by prior "professional" engineering experience and must contribute directly and significantly to the candidate's professional engineering competence. For example, an engineer may be assigned to a management or a computer systems analysis position in preparation for assumption of higher level responsibilities in engineering administration.

Supervisory or Staff Advisory Experience:

- A. Supervisory Experience: Professional engineering experience which included training subordinates, coordinating and assigning workloads, evaluating performance, assisting in difficult and problem areas, and maintaining high standards of work and timely accomplishment of work objectives.
- B. Staff Advisory Experience: Professional engineering experience as technical expert in a specialized area or program function performing staff advisory, consultative and/or reviewing the work of a staff of specialists assigned to such activities as long-range planning, research and/or development of specific projects, programs, etc.

Administrative Experience:

Professional engineering experience which included the planning (including budget planning and justification), organizing, staffing, policy formulation and implementation of same, and directing, a program providing staff services and/or assistance.

\*\*For the Engineering Program Manager level, administrative aptitude rather than actual administrative experience may be accepted. This requirement will be considered to have been met when there is strong affirmative evidence of the necessary administrative abilities. Such evidence may be in the form of success in regular or special assignments or projects which involved administrative problems; interest in management demonstrated by the performance of work assignments in a manner which clearly indicates awareness of managerial problems and the ability to solve them; completion of educational or training courses in the area of management accompanied by the application of the principles, which were learned, to work assignments; management's observation and evaluation of the applicant's leadership and managerial capabilities; success in trial assignments to managerial and/or administrative tasks.

Substitutions Allowed:

1. A master's degree in a pertinent engineering field from a school of engineering in an accredited college or university may be substituted for one year of engineering experience.
2. Excess Supervisory, Staff Advisory or Administrative experience of the type and quality described above may be substituted for Engineering Experience on a year-for-year basis.
3. Excess Administrative experience of the type and quality described above may be substituted for Supervisory or Staff Advisory experience on a year-for-year basis.

License Required:

Applicant must possess a valid license as a professional engineer in the State of Hawaii.

Quality of Experience:

Possession of the required number of years of experience will not in itself be accepted as proof of qualification for a position. The applicant's overall experience must have been of such scope and level of responsibility as to conclusively demonstrate that he/she has the ability to perform the duties of the position for which he/she is being considered.

Selective Certification:

Specialized knowledge, skills and abilities may be required to perform the duties of some positions. For such positions, Selective Certification Requirements may be established and certification may be restricted to eligibles who possess the pertinent experience and/or training required to perform the duties of the position.

Agencies requesting selective certification must show the connection between the kind of training and/or experience on which they wish to base selective certification and the duties of the position to be filled.

Tests:

Applicants may be required to qualify on an appropriate examination.

Physical and Medical Requirements:

Applicants must be able to perform the essential duties and responsibilities of the position effectively and safely, with or without reasonable accommodation.

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This is an amendment to the minimum qualification specification for the EMCP classes ENGINEERING PROGRAM MANAGER AND ENGINEERING PROGRAM ADMINISTRATOR which was approved on October 15, 1982.

DATE APPROVED: 12/23/11

  
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for BARBARA A. KREIG  
Director of Human Resources Development