



Hewitt Associates LLC

Argentina	Channel Islands	Greece	Japan	Poland	Sweden
Australia	Chile	Hong Kong	Malaysia	Puerto Rico	Switzerland
Austria	China	Hungary	Mauritius	Singapore	Thailand
Belgium	Czech Republic	India	Mexico	South Africa	United Kingdom
Brazil	France	Ireland	Netherlands	South Korea	United States
Canada	Germany	Italy	Philippines	Spain	Venezuela

To protect the confidential and proprietary information included in this material, it may not be disclosed or provided to any third parties without the approval of Hewitt Associates LLC.

Biotechnology Job Catalog

Pharmaceutical Industry Association

2006 Edition

About This Material

This document is the biotechnology job catalog developed by a team comprised of PIA members that have biotechnology operations in Puerto Rico, PIA's Education Committee representatives and Hewitt Associates, an HR consulting and outsourcing firm. The catalog details the different jobs that have been identified by industry representatives as "core" and "hard to hire positions" for the biotechnology industry in Puerto Rico. The purpose of this catalog is to document the educational and technical requirements needed for core positions in the biotechnology industry and facilitate the dialogue among the industry, government and the academia.

The job catalog was developed using the following process:

- Hewitt Associates compiled a list of key biotechnology roles classified by job family. The list included typical tasks of the role, educational and experience requirements and technical skills.
- The list was discussed with representatives from Abbott, Amgen, J&J and Lilly del Caribe. Each job was reviewed to determine if it was "core" and/or "hard to hire."
 - Core positions were defined as those "that manage active ingredients and product manufacturing components. The tasks of these positions cannot be outsourced and are essential to the manufacturing operations."
 - Hard to hire positions were defined as "positions that require a specialized set of technical skills for which there is a limited pool of candidates."
- A detailed catalog was developed for core and hard to hire positions. The organizational level, educational requirements and technical skills of these jobs were discussed with the team and further refined.

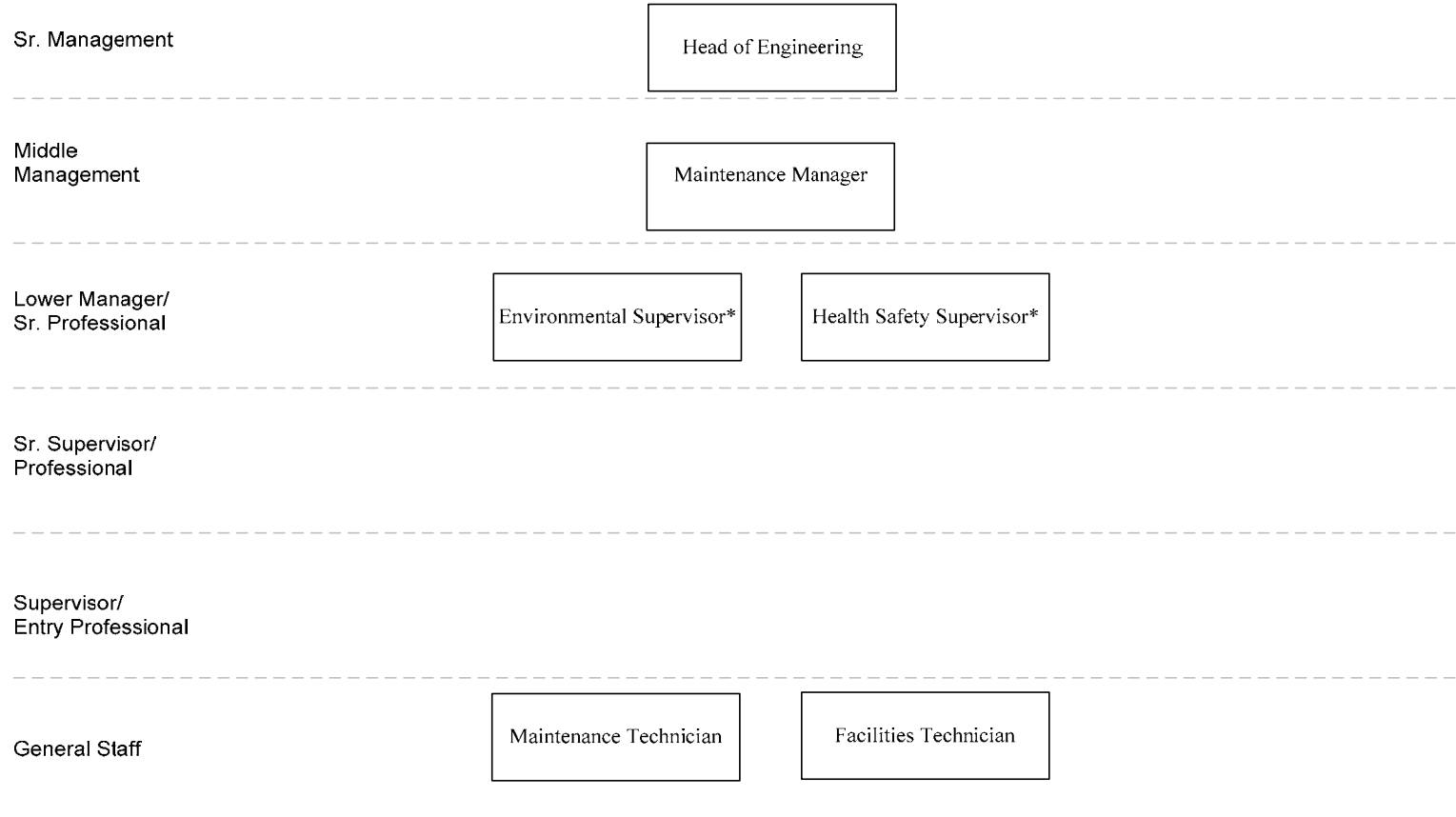
As you review this document, please note that the positions included in the final catalog are representative of the typical, core, positions for a Pharmaceutical Active Ingredient biotechnology operation. In addition, there may be more organizational levels for some positions, which are tied to career progression within the same role.

Job Catalog



Hewitt

Engineering



*For some companies, these positions report to different departments (e.g., HR)

Job Title	Role Description	Education/Experience	Technical Skills/Requirements
Environmental Supervisor	Responsible for the research, coordination, implementation and management of environmental issues including waste disposal, air/water quality, pollution, hazardous waste, and land management. Prepares permit applications and performs environmental regulatory reviews and participates in environmental audits. Develops and maintains appropriate documentation to assure compliance with governmental regulations.	Requires a BS in Environmental, Civil or Chemical Engineering, or related discipline, MS is preferred and a minimum of 3-5 years environmental engineering experience. Knowledge of engineering documentation including expertise in permitting, pollution prevention, environmental regulatory compliance, training and reporting is required.	Strong knowledge of SOP, Regulatory Agencies and OSHA regulations. Experience in GMP and other technical requirements. Skills in Refrigeration System (HVAC), Purified and Distilled Water System, Automation-computerized control system knowledge and PLC (Programmable Logistic Controllers). Investigation skills. Knowledge of computers programs. Bilingual; to speak, read and write in English and Spanish.
Facilities Technician	Performs daily monitoring, repair and preventive maintenance activities on critical systems and facility equipment. Also troubleshoots, install and repair new and existing systems, including refrigeration equipment, water systems, HVAC systems, and electrical systems. Documents, repairs, adjusts and replaces equipment and/or components per GMP standards. May also provide input and corrections to Standard Operating Procedures (SOP) and assist engineering in the evaluation of new equipment technology.	Requires AA/Asor Certificate of Completion at a 2-year technical school in mechanical/electrical field, or high school diploma with 1-2 years of experience in GMP maintenance. Experience in pharmaceutical or bio pharmaceutical environment is preferred.	Knowledge of GMP regulations. Knowledge of SOP, and major trades, such as electrical, plumbing and HVAC/refrigeration, including the ability to interpret blueprints, and specifications. Knowledge of investigation techniques and computer programs. Bilingual; to speak, read and write in English and Spanish.
Health and Safety Supervisor	Responsible for overseeing and ensuring compliance with governmental occupational and health regulations. Protects company assets by eliminating chance of personal injury or property damage from business activities. Oversees safety checks and inspections with appropriate safety representatives. Implements any necessary safety improvements, including corrective	Requires a BS in Environmental, Civil or Chemical Engineering, or related discipline, MS is preferred and a minimum of 3-5 years environmental engineering experience.	Strong knowledge of OSHA and Workers Compensation regulations. Experience in GMP and other technical requirements. Knowledge of investigations process and computer programs. Bilingual; to speak, read and write in English and Spanish.

Job Title	Role Description	Education/Experience	Technical Skills/Requirements
	actions, monitoring and reporting when required.		
Maintenance Manager	Provide maintenance and assure labor continuity, minimizing equipment failures. Maintain equipment and facilities in proper conditions. Responsible for the HVAC and preventive maintenance, replacement/installation of equipment, laboratory and building facilities. Supports the operation in a constantly changing mode and continuous growth.	BS in Mechanical, Electrical or Chemical Engineering	Knowledge of GMP regulations. Knowledge of SOP. Skills in Refrigeration System (HVAC), Purified and Distilled Water System, Automation-computerized control system knowledge and PLC (Programmable Logistic Controllers). Knowledge of investigations and computer programs. Bilingual, to speak read and write in English and Spanish.
Maintenance Technician	Responsible of reparation, installation, inspection, calibration, and preventive maintenance of manufacturing equipment, instrumentation, and utilities for biopharmaceutical products in accordance with applicable regulations (Company Standards, CGMP, OSHA, etc.).	Associate Degree in Industrial Electricity, Mechanics, Electrical Technology or related field.	Knowledge of GMP regulations. Knowledge of SOP, investigations and computer programs. Experience in calibration, utilities and/or instrumentation. Bilingual; to speak, read and write in English and Spanish.