

PLAD Principal Process Engineer

Scope

As a member of the PLAD Technology Group, the individual works with a team of process/hardware/software engineers to develop VSEA's next generation of processes and implant tools, and related technologies. Leads process development, process customization, and productization programs, and works on successful resolution of process integration and process control issues during insertion into a high volume IC manufacturing. Provides technical consulting or advice to peers or immediate manager on projects and exploratory concepts. Develops solutions to problems that require extensive investigation and clarification. Revised processes, procedures, or methods may be developed to obtain the appropriate solutions. Provides recommendations regarding technical approach or design, resource allocation, and / or time schedules on projects. Recommendations often fall beyond pre-established technical guidelines and available precedents. Requires planning to ensure the timely completion of several complex independent tasks and/or manage complex projects and provide technical direction to others. Works with general guidance but independently determines the best approach for solving a problem. Work is reviewed by management at critical milestones to determine the extent to which pre-established objectives are being met. Ongoing activities are self managed. May provide project leadership or technical guidance to technical staff. Erroneous decisions, recommendations or failure to get results will cause delays in schedules and result in allocation of additional resources. Up to 25% travel is a requirement of the position.

Skills and Qualifications

MS (Ph.D. preferred) in Electrical Engineering, Materials Science, Physical Chemistry, Applied Physics, or Chemical Eng., with 7+ years of experience in CMOS process development, CMOS device engineering, or front-end CMOS process integration position with an IC manufacturer, or in advanced CMOS process development with a major process equipment supplier for the semiconductor industry. Strong understanding of plasma processing, CMOS device physics, CMOS front-end process integration, materials science of ion implantation into semiconductors. In-depth knowledge of interdependencies between key implant process parameters and electrical characteristics of CMOS devices. Hands-on experience with development, qualification, sustaining engineering and troubleshooting of plasma or implant processes in advanced CMOS technology. Understanding of unit processes immediately preceding and succeeding ion implantation (clean, PR strip, anneal) for fabrication of CMOS devices and of advanced metrology of ion implantation processes. Effective technical written, verbal communication skills and interpersonal skills are required.