



JOB INFORMATION

Job Code:	167405
Job Title:	VLSI Test Engineer
FLSA Status:	Non-Exempt
Supervisory:	Supervises employees and/or student workers.
Job Family:	Computer Research
Job Family Group:	Information Technology
Management Level:	7 Individual Contributor

JOB SUMMARY

Provides electronic test, engineering, and design support for semiconductor wafer engineering laboratory. Troubleshoots test instruments and related equipment and systems. Supervises assigned subordinate staff. Participates in budget development and administration, and development of internal policies and procedures.

JOB QUALIFICATIONS:

Education

Req	Pref	Degree	Field of Study	
X		Bachelor's degree		
	X	Bachelor's degree	Electrical Engineering	Or
	X	Bachelor's degree	in related field(s)	

Additional Education

Check here if experience may substitute for some of the above education.

Combined experience/education as substitute for minimum education

Work Experience

Req	Pref	Work Experience	Experience Level	
X		5 years		
	X	10 years	in semiconductor electronic testing or related field.	

Additional Work Experience

Check here if education may substitute for some of the above work experience.

Combined experience/education as substitute for minimum work experience

Knowledge, Skills and Abilities

Req	Pref	Functional Skills
X		Comprehensive knowledge of standard electronic test equipment and computer user interfaces.
X		Ability to read, interpret, and explain electrical and electronic schematics and mechanical drawings.
X		Understanding of industry practice in the areas of materials storage and handling, care and maintenance of test equipment, and process and job flow documentation.

Knowledge, Skills and Abilities

Req	Pref	Functional Skills
X		Basic electronic and mechanical assembly skills including soldering and wire-wrapping.
X		Working knowledge of analog and digital circuits (amplifiers, switches, buffers, oscillators, gates, latches, flip-flops, optoisolators), including ability to create prototype designs and circuits as required by wafer laboratory activities.
X		Basic programming skills in at least two languages and operating systems used in the wafer laboratory environment.
X		Intermediate level skills in file manipulations and text file editing on at least two widely used computer operating systems.
X		Working knowledge of CAD software, spreadsheets, and other electronic engineering software tools.
	X	Practical experience with several laboratory applications of personal computer hardware and software and UNIX-based tester workstations.
	X	Proficiency in file manipulations, text file editing, and command line utilities of three widely used computer operating systems (UNIX, VMS, DOS).

Other Job Factors

- May require periodic weekend or evening work.

JOB ACCOUNTABILITIES

	% Time	Essential	Marginal	N/A
Shares test engineering staff responsibilities for scheduling, coordinating, and modifying wafer laboratory work flow.				
Coordinates operation and maintenance of wafer and packaged device test equipment including automatic, semi-automatic, and manual wafer probe stations, electronic and mechanical interfaces from probers to test instruments, parametric and functional testers, and auxiliary test instruments and equipment. Troubleshoots test instruments, equipment, and systems and makes necessary modifications or repairs. Provides backup operations support.				
Oversees maintenance of wafer laboratories in consultation with senior test engineering staff. Coordinates contact with field service staff and electrical, air conditioning, and other contractors when outside service is required.				
Supervises assigned subordinate staff. Participates in screening and interviewing of job candidates and in hiring and training of staff. Evaluates employee performance and provides guidance, counseling, and discipline for assigned staff.				
Recommends departmental goals and objectives and communicates them to staff. Reassesses or redefines priorities as appropriate in order to achieve performance objectives.				
Develops and maintains, in consultation with programming staff, software for semiconductor device testing.				
Produces and distributes standard and custom wafer laboratory test reports using command-line-driven report generators and electronic mail. Provides support for maintenance and development of report generating software.				
Supports custom test systems activities, including: creation and maintenance of designs and design documents (schematics, printed circuit board artwork, and mechanical and assembly drawings); purchase of electronic and mechanical parts; and coordination of assembly, test, debugging, and maintenance of prototype systems and existing custom installations.				
Participates in development and documentation of internal operating policies and procedures. Assists in development and dissemination of policies and procedures. Provides interpretation as required.				
Participates in development and administration of department budget. Provides projections and financial status reports as needed.				
Networks with professional counterparts inside and outside the university. Participates in professional associations to stay informed of new developments and technologies. Makes recommendations to senior management regarding technology changes based on developments in field and business needs.				

Other Requirements

<i>Essential:</i>	<i>Emergency Response/Recovery</i>	<i>Essential:</i>	<i>Mandated Reporter</i>
	In the event of an emergency, the employee holding this position is required to “report to duty” in accordance with the university’s Emergency Operations Plan and/or the employee’s department’s emergency response and/or recovery plans. Familiarity with those plans and regular training to implement those plans is required. During or immediately following an emergency, the employee will be notified to assist in the emergency response efforts, and mobilize other staff members if needed.		A mandated reporter who in his or her professional capacity has knowledge of, or reasonably suspects a person who is under the age of 18 years, elderly, or a dependent adult has been the victim of abuse or neglect must report the suspected incident. The reporter must contact a designated agency immediately or as soon as practically possible by telephone or in writing within 36 hours. By virtue of the associated job duties, this position qualifies as a mandated reporter as required by state law and USC’s policy at: https://policy.usc.edu/mandated-reporters/
<i>Campus Security Authority (CSA)</i>			<i>Essential:</i>
By virtue of the associated job duties, this position qualifies as a Campus Security Authority as required by law and USC’s policy at: https://dps.usc.edu/alerts/clery/			No

ACKNOWLEDGMENTS

The above statements reflect the essential and non-essential functions as necessary to describe the principle contents of the job. They are not intended to be a complete statement of all work requirements or duties that may be required of the position. I understand that I may be asked to perform other duties as assigned. USC reserves the right to add or change duties at any time.

The University of Southern California is an Equal Opportunity Employer. USC prohibits discrimination on any basis protected under federal, state, or local law, regulation, or ordinance or university policies. All employment decisions are based on individual qualifications and business need.

I acknowledge receipt of this job description and its associated physical requirements. I have read and understand the job description and job requirements and agree to abide by their contents. I realize that duties may be requested of me that are not specifically stated herein. I understand that I will be expected to adjust to potential fluctuations in work volume. I understand that, if I have any questions about the essential functions or expectations of my position, my supervisor and/or HR partner are available to discuss them with me.

Print Employee Name

Signature

Date

Print Manager Name

Signature

Date

This job description describes the general nature and level of work required by the position. It is not intended to be an all-inclusive list of qualifications, skills, duties, responsibilities or working conditions of the job. The job description is subject to change with or without notice, and Management reserves the right to add, modify or remove any qualification or duty. Nothing in this job description changes the existing at-will employment relationship between the university and the employee occupying the position.