



Semiconductor Device Character Eng - MOSIS Job Description

JOB INFORMATION

Job Code:	167412
Job Title:	Semiconductor Device Character Eng - MOSIS
FLSA Status:	Exempt
Supervisory:	May lead one or more employees performing similar work.
Job Family:	Computer Research
Job Family Group:	Information Technology
Management Level:	7 Individual Contributor

JOB SUMMARY

Designs and develops semiconductor device characterization methodologies and hardware. Applies knowledge of device physics and electrical engineering principles to solve highly technical engineering problems centered on complex micro- and nano-electronic technologies. Works independently receiving minimal direction.

JOB QUALIFICATIONS:

Education

Req	Pref	Degree	Field of Study
X		Bachelor's degree	
	X	Bachelor's degree	Electrical Engineering

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	7 years	

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		Thorough knowledge of device physics and VLSI electrical engineering principles at the device and circuit level.
X		Working knowledge of electronic semiconductor test equipment, CAD tools, and other engineering software tools.
	X	Experience in semiconductor electronic characterization or related field.

Other Job Factors

JOB ACCOUNTABILITIES

	<i>% Time</i>	<i>Essential</i>	<i>Marginal</i>	<i>N/A</i>
Develops complex electronic characterization systems and hardware using state-of-the-art approaches and measurement techniques. Designs micro electronic test structures for advanced integrated circuits.				
Plans and executes characterization development activities for semiconductor micro- and nano-technologies. Solves a wide range of complex engineering problems related to all semiconductor processes available through MOSIS.				
Formulates and defines device characterization specifications and guidelines for advanced fabrication processes. Analyzes wafer electrical parameter data, providing interpretation and judgment requiring extensive knowledge of device physics and electrical engineering principles.				
Leads subordinate engineering staff in executing device characterization procedures, maintenance and operation of measurement equipment.				
Develops and evaluates policies and procedures for the laboratory. Directs execution of characterization activity in the laboratory.				
Stays informed of new developments and technologies by reading journals and other pertinent publications, maintaining contact with vendors, and participating in professional organizations, meetings and seminars.				

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.