UNIVERSITY OF SOUTHERN CALIFORNIA

VLSI Design Engineer - MOSIS

Job Code: 167151

Grade: TK
OT Eligible: No
Comp Approval: 10/17/2013

JOB SUMMARY:

Uses design methodologies to implement complex electronic circuits utilized in advanced Very Large Systems Integration (VLSI) processes through the Metal Oxide Semiconductor Implementation Service (MOSIS) at ISI.

JOB ACCOUNTABILITIES:

*E/M/NA % TIME

Supports internal and external designers and researchers with advanced electronic circuit design technologies. Develops and applies design methodologies to fabrication technologies for other operations and services under MOSIS. Assists users with design tools, libraries and technology files.

Formulates and documents procedures of libraries and technology files using commercially designed tools and design kits. Implements state-of-the-art design methodologies for advanced fabrication processes. Selects from variety of CAD tools the most appropriate equipment for users of MOSIS Service.

Establishes and maintains appropriate network of professional contacts. Maintains currency with professional organizations and publications.

Attends and participates in meetings, conferences and seminars as requested or required. Represents university and/or unit, as assigned or appropriate.

Performs other related duties as assigned or requested. The university reserves the right to add or change duties at any time.

*Select E (ESSENTIAL), M (MARGINAL) or NA (NON-APPLICABLE) to denote importance of each job function to position.

EMERGENCY RESPONSE/RECOVERY:

Essential: Yes

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.

JOB QUALIFICATIONS:

Minimum Education:

Bachelor's degree
Combined experience/education as substitute for minimum education
Minimum Experience:

3 years

Minimum Field of Expertise:

Directly related industrial experience.

Preferred Education:

Bachelor's degree

Skills: Other:

Analysis
Assessment/evaluation
Communication -- written and oral skills
Conceptualization and design
Networking
Organization
Planning
Public speaking/presentations

Skilled in:

Computer-Aided Design (CAD) tools
Device physics
Electronic semiconductor test equipment
Engineering software tools
Integrated circuit design
Mathematics
Semiconductor device modeling
Software design tools
Technical documentation
VLSI electrical engineering at circuit level
VLSI electrical engineering at device level

Skills: Machine/Equipment:

Computer aided tools for circuit or device level simulations
Computer network (department or school)
Computer network (university)
Computer peripheral equipment
Fax
Personal computer
Photocopier

Supervises: Level:

May oversee student, temporary and/or resource workers.

Comments:

May require periodic weekend or evening work.

SIGNATURES:
Employee: ___________________________ Date: ___________________________
Supervisor: ___________________________ Date: ___________________________

The above statements are intended to describe the general nature and level of work being performed. They are not intended to be construed as an exhaustive list of all responsibilities, duties and skills required of personnel so classified.

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