UNIVERSITY OF SOUTHERN CALIFORNIA
VLSI Design Engineer, Senior - MOSIS
Job Code: 167155

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

JOB SUMMARY:
Develops methodologies for the design and behavior determination of complex electronic circuits utilized in advanced Very Large Systems Integration (VLSI) processes through the Metal Oxide Semiconductor Implementation Service (MOSIS) at ISI.

JOB ACCOUNTABILITIES:

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<th>*E/M/NA</th>
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Designs complex electronic systems using state-of-the-art methodologies and fabrication processes. Designs specifications of systems in abstract form and translates into optimum design approach.

Evaluates, designs and establishes project goals and sets priorities. Establishes, assigns and approves project schedules.

Provides leadership, guidance and direction to lower level staff and student workers as required. Coordinates workload and sets priorities and timelines.

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: No

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:

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

5 years

Minimum Field of Expertise:

Experience in developing methodologies for the design and behavior determination of complex electronic circuits utilized in advanced Very Large Systems Integration.

Preferred Education:

Master's degree

Preferred Field of Expertise:

Lead experience with other engineers.

Skills: Other:

Analysis
Assessment/evaluation
Communication -- written and oral skills
Conceptualization and design
Lead/guidance skills
Networking
Organization
Planning
Project management
Public speaking/presentations
Scheduling

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:

Leads employees performing similar work on a project basis.
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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