



MOSart Labs

Art of VLSI

Advanced Physical Design Program

(Live Online Classes)

Your Gateway to Semiconductor World

10 Months Industry Ready Program

100% Placement-Oriented Program

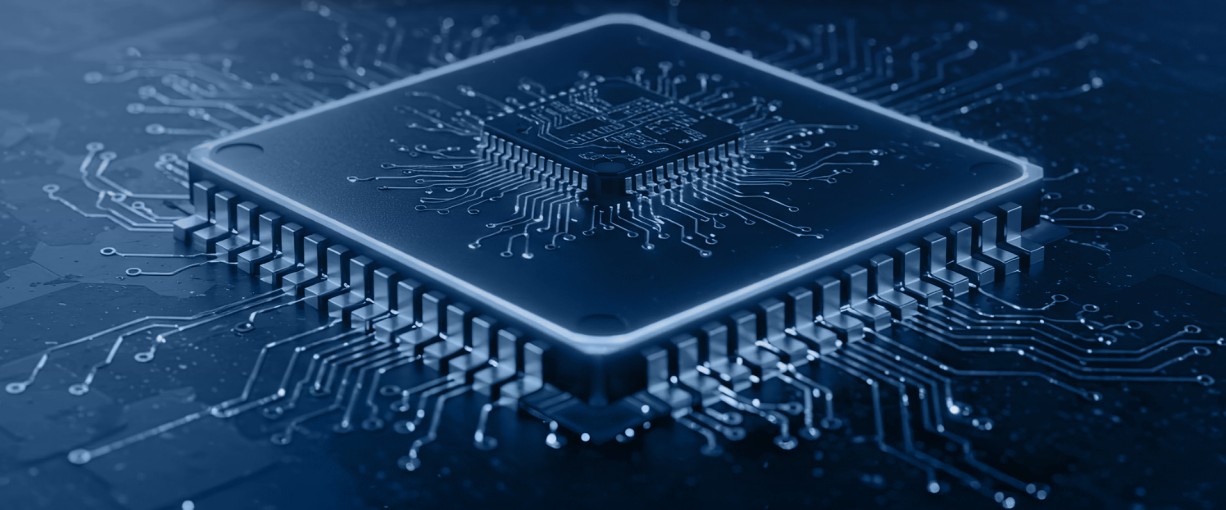
250+ Hrs of Structured Learning

Real chip design projects

6 Months Course + 4 Months Internship Project

Hands-on training with industry-standard tools

Get trained by India's leading chip design experts





About **Physical Design** Program

The semiconductor industry is witnessing rapid growth, creating strong demand for skilled Physical Design Engineers. MOSart Labs is an active chip design company, not just a training institute, offering the Advanced Physical Design Live Online Program to build industry-ready VLSI professionals.

Learn inside a real chip design environment with hands-on training in Floorplanning, Power Planning, Placement, CTS, Routing, STA, Physical Verification, Signoff, and industry-standard EDA tools while working on practical implementation projects.

The 10-Month Live Online Program, consisting of a 6-Month Course and a 4-Month Industry Internship Project, combines expert mentorship, real-world project experience, and industry exposure to prepare you for a successful career in Physical Design.



Learn Inside a Chip Design Company

Train inside an active chip design company with real industry workflows.



Live Online Interactive Classes

Live online instructor-led training with personalized mentoring and continuous practical lab sessions.



250+ Hours of Structured Learning

Gain extensive hands-on floorplanning, routing, STA, and signoff experience.



4-Month Industry Internship

Work on real Physical Design projects with expert guidance.



Learn from Industry Veterans

Learn directly from experienced VLSI professionals with decades of industry expertise.



High-Paying Career Opportunities

Build job-ready Physical Design skills for leading semiconductor companies.

Inside MOSart Labs



100+ Potential Hiring Companies





4 Month Industry Project Internship

At MOSart Labs, an active chip design company, learning extends beyond the classroom. During the 4-month internship, you'll execute a complete Physical Design project following professional semiconductor implementation methodologies.

From Project Setup & Design Analysis to Logic Synthesis & Floorplanning, Placement & CTS, Routing & Timing Closure, Physical Verification & Sign-off, and Industry Project Presentation, you'll experience the complete backend implementation flow under the guidance of experienced VLSI engineers.

Build practical project experience, strengthen your portfolio, and graduate with the confidence to contribute to real semiconductor design teams from day one.

Internship Project

A 4-month industry-level backend project covering the complete RTL-to-GDSII implementation flow.

1

Project Setup & Design Analysis

Analyze RTL, review constraints, and configure the physical design environment.

2

Logic Synthesis & Floor planning

Generate the netlist, create the floorplan, and build the power distribution network.

3

Placement & Clock Tree Synthesis (CTS)

Optimize placement, reduce congestion, and implement a balanced clock tree.

4

Routing & Timing Closure

Perform routing and resolve setup and hold violations for timing closure.

5

Physical Verification & Sign-off

Run DRC, LVS, STA, and power checks to achieve tape-out-ready sign-off.

6

Industry Project Presentation

Present the complete backend project with reports, documentation, and design review.



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A 10 Months Journey – Advanced PD Design

Phase 1 (Live Online)

3 Months (PD Foundation) with Course Project

- Learn Physical Design fundamentals.
- Master CMOS, DRC/LVS, Layout, and fabrication flow.
- Build a strong backend foundation.

Phase 2 (Live Online)

3 Months (Advanced PD) with Course Project

- Learn Floorplanning, CTS, Routing, and STA.
- Apply advanced implementation concepts through hands-on projects.

Phase 3 (Live Online)

4 Months (Industry Internship Project)

- Work on an industry-level Physical Design project.
- Gain real semiconductor industry experience.

Phase 4

Internship Project Review

- Get your internship project reviewed by industry experts.
- Build real-world semiconductor industry experience.

Phase 5

Job Interview Preparation

- Build your portfolio and attend mock interviews.
- Prepare thoroughly for placement opportunities.

Phase 6

Get Placed

- Attend interviews scheduled by our placement team.
- Crack your interviews and enter the semiconductor industry.

OUR LEADERSHIP TEAM



Rajesh Gupta

27 Years Experience
Ex- Country Head
Micron & ams OSRAM



Dr. Krishna Kanth

23 Years Experience
Ex-Director
ams OSRAM



What You Will Learn

Foundation Module

Physical Design

- CMOS Process Technology
- Layout Design Principles
- Design Rule Checking (DRC)
- Layout Versus Schematic (LVS)
- Design for Manufacturability (DFM)
- Standard Cell Libraries
- Semiconductor Fabrication Flow
- Physical Verification
- Industry EDA Tools
- Hands-on Layout Projects

Specialization Module

Advanced Physical Design

- Floor planning Techniques
- Power Planning
- Cell Placement
- Clock Tree Synthesis (CTS)
- Signal Routing
- Static Timing Analysis (STA)
- Timing Closure
- Physical Signoff Flow
- ECO Optimization
- Industry Tapeout Project

Career Opportunities

- Physical Design Engineer
- ASIC Physical Design Engineer
- Backend Design Engineer
- STA Engineer
- Physical Verification Engineer
- Implementation Engineer



Program Outcomes

By the end of this program, you'll have the technical skills, practical experience, and confidence to begin your career in Physical Design.

Become an Industry-Ready Physical Design Engineer

Master backend implementation with hands-on project experience.

Master the Complete RTL-to-GDSII Flow

Gain end-to-end command of floorplanning, placement, CTS, routing, STA, timing closure and signoff.

Build a Strong Industry Portfolio

Showcase implementation projects completed during coursework and internship.

Industry Internship Experience

Gain real-world exposure on a live RTL-to-GDSII project that strengthens your technical skills and job readiness.

Master Industry-Standard EDA Tools

Gain practical experience with leading physical implementation and signoff tools.

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